THE COUNTY COUNSEL
COUNTY OF ORANGE
333 W. SANTA ANA BLVD., SUITE 407
SANTA ANA, CA 92701
MAILING ADDRESS: P.O. BOX 1379
SANTA ANA, CA 92702-1379
(714) 834-3300
FAX: (714) 834-2359

Geoffrey K. Hunt
Supervising Deputy
(714) 834-3306

File No.

June 29, 2010

Commission on State Mandates
980 Ninth Street, Suite 300
Sacramento, CA 95814

Re: Joint Unfunded Mandate Test Claim by the County of Orange and various cities in Orange County concerning California Water Quality Control Board Santa Ana Region Order No. R8-2009-0030

Enclosed you will find test claims asserting that certain provisions of the Order R8-2009-0030 issued by the California Water Quality Control Board Santa Ana Region (Santa Ana RWQCB) on May 22, 2009 (2009 Permit) are unfunded State mandates (Test Claims). The 2009 Permit regulates discharges from the municipal separate storm sewer system (MS4) in north Orange County. The County of Orange, Orange County Flood Control District (OCFCD) and the incorporated cities of Orange County within Sana Ana RWQCB's jurisdiction are permitees under the 2009 Permit (Permitees). These Test Claims are being filed jointly by a number of the Permitees, namely the County of Orange, OCFCD and the cities of Anaheim, Brea, Buena Park, Costa Mesa, Cypress, Fountain Valley, Fullerton, Huntington Beach, Irvine, Lake Forest, Newport Beach, Placentia, Seal Beach and Villa Park. (Test Claimants)

Enclosed you will find the separate Test Claims of each of the Test Claimants. Because most provisions of the 2009 Permit apply to all of the Permitees and the issues raised in these Test Claims are largely common to all of the Test Claimants, a single Narrative Statement in support of the Test Claims has been prepared and enclosed. Enclosed also are the required declarations of each of the Test Claimants which are intended to be in support of the respective Test Claims.

You will also find enclosed copies of the documentation required to be submitted along with Test Claims, including copies of the 2009 Permit, along with its supporting fact sheet, the previous 2002 Permit, which was renewed and superseded by the 2009 Permit and the statutes, regulations, cases and other authorities cited in the Narrative Statement.

One hard copy of all of the enclosed documents is being provided as well as a scanned CD of the entire package.

Thank you for your consideration of this matter.

Very truly yours,

NICHOLAS S. CHRISOS
COUNTY COUNSEL

By _____
Geoffrey K. Hunt, Supervising Deputy

GKH:azs

Enclosures and cc list on following pages.

Enclosures:

TEST CLAIMS:

County of Orange and Orange County Flood Control District
City of Anaheim
City of Brea
City of Buena Park
City of Costa Mesa
City of Cypress
City of Fountain Valley
City of Fullerton
City of Huntington Beach
City of Irvine
City of Lake Forest
City of Newport Beach
City of Placentia
City of Seal Beach
City of Villa Park

WRITTEN NARRATIVE

DECLARATIONS:

County of Orange and Orange County Flood Control District
City of Anaheim
City of Brea
City of Buena Park
City of Costa Mesa
City of Cypress
City of Fountain Valley
City of Fullerton
City of Huntington Beach
City of Irvine
City of Lake Forest
City of Newport Beach
City of Placentia
City of Seal Beach
City of Villa Park

DOCUMENTATION

Executive Order and Related Documentation

California Regional Water Quality Control Board, Santa Ana Region Order No. R8-2009-0030 (NPDES No. CAS618030)
California Regional Water Quality Control Board, Santa Ana Region Fact sheet dated April 24, 2009 in support of Order No. R8-2009-0030 (NPDES No. CAS618030)
California Regional Water Quality Control Board, Santa Ana Region Order No.R8-2002-0010 (NPDES No. CAS618030)

Federal and State Cases, Statutes and Constitutional References (44 documents)

Miscellaneous Authorities (18 documents)

cc: Cristina L. Talley, City Attorney for City of Anaheim
Candice K. Lee, Deputy City Attorney for Cities of Brea, Buean Park and Seal Beach
Kimberly Hall-Barlow, City Attorney for Cities of Costa Mesa and Fullerton
Gonzalo M. Vazquez, Water Quality Manager for City of Cypress
Steven M. Hauerwaas, Environmental Services Administrator, City of Fountain Valley
Michael Vigliotta, Deputy City Attorney for City of Huntington Beach
Richard Montevideo, Attorney at Law representing City of Irvine
Andre Monette, esq., Special Counsel for City of Lake Forest
Leonie Mulvihill, Assistant City Attorney for City of Newport Beach
Robert Makowski, Environmental Compliance Officer for City of Placentia
Lori Sassoon, City Manager for City of Villa Park

JOINT TEST CLAIMS

IN SUPPORT OF JOINT TEST CLAIMS IN RE SANTA ANA RWQCB

ORDER NO. R8-2009-0030

(NPDES NO. CAS618030)

Of

County of Orange and Orange County Flood Control District
City of Anaheim
City of Brea
City of Buena Park
City of Costa Mesa
City of Cypress
City of Fountain Valley
City of Fullerton
City of Huntington Beach
City of Irvine
City of Lake Forest
City of Newport Beach
City of Placentia
City of Seal Beach
City of Villa Park

1. TEST CLAIM TITLE

California Regional Water Quality Control Board, Santa Ana Region, Order No. R8-2009-0030

2. CLAIMANT INFORMATION

County of Orange/Orange County Flood Control District
Name of Local Agency or School District

Jess Carbajal
Claimant Contact

Director of Public Works
Title

300 North Flower Street
Street Address

Santa Ana, CA 92703
City, State, Zip

(714) 667-3217
Telephone Number

Fax Number

Jess.Carbajal@ocpw.ocgov.com
E-Mail Address

3. CLAIMANT REPRESENTATIVE INFORMATION

Claimant designates the following person to act as its sole representative in this test claim. All correspondence and communications regarding this claim shall be forwarded to this representative. Any change in representation must be authorized by the claimant in writing, and sent to the Commission on State Mandates.

Geoffrey K. Hunt
Claimant Representative Name

Supervising Deputy County Counsel
Title

County of Orange
Organization

10 Civic Center Plaza / P.O. Box 1379
Street Address

Santa Ana, CA 92702-1379
City, State, Zip

(714) 834-3306
Telephone Number

(714) 834-2359
Fax Number

Geoff.Hunt@coco.ocgov.com
E-Mail Address

For CSM Use Only

Filing Date: RECEIVED June 30, 2010 Commission on State Mandates

Test Claim #: 09-TC-03

4. TEST CLAIM STATUTES OR EXECUTIVE ORDERS CITED

Please identify all code sections, statutes, bill numbers, regulations, and/or executive orders that impose the alleged mandate (e.g., Penal Code Section 2045, Statutes 2004, Chapter 54 [AB 290]). When alleging regulations or executive orders, please include the effective date of each one.

California Regional Water Quality Control Board, Santa Ana Region, Order No. R8-2009-0030 (NPDES No. CAS618030)

☐ *Copies of all statutes and executive orders cited are attached.*

Sections 5, 6, and 7 are attached as follows:

5. Written Narrative: pages _____ to _____.
6. Declarations: pages _____ to _____.
7. Documentation: pages _____ to _____.

Sections 5, 6, and 7 should be answered on separate sheets of plain 8-1/2 x 11 paper. Each sheet should include the test claim name, the claimant, the section number, and heading at the top of each page.

5. WRITTEN NARRATIVE

Under the heading "5. Written Narrative," please identify the specific sections of statutes or executive orders alleged to contain a mandate.

Include a statement that actual and/or estimated costs resulting from the alleged mandate exceeds one thousand dollars ($1,000), and include all of the following elements for each statute or executive order alleged:

(A) A detailed description of the new activities and costs that arise from the mandate.

(B) A detailed description of existing activities and costs that are modified by the mandate.

(C) The actual increased costs incurred by the claimant during the fiscal year for which the claim was filed to implement the alleged mandate.

(D) The actual or estimated annual costs that will be incurred by the claimant to implement the alleged mandate during the fiscal year immediately following the fiscal year for which the claim was filed.

(E) A statewide cost estimate of increased costs that all local agencies or school districts will incur to implement the alleged mandate during the fiscal year immediately following the fiscal year for which the claim was filed.

(F) Identification of all of the following funding sources available for this program:
- (i) Dedicated state funds
- (ii) Dedicated federal funds
- (iii) Other nonlocal agency funds
- (iv) The local agency's general purpose funds
- (v) Fee authority to offset costs

(G) Identification of prior mandate determinations made by the Board of Control or the Commission on State Mandates that may be related to the alleged mandate.

6. DECLARATIONS

Under the heading "6. Declarations," support the written narrative with declarations that:

(A) declare actual or estimated increased costs that will be incurred by the claimant to implement the alleged mandate;

(B) identify all local, state, or federal funds, and fee authority that may be used to offset the increased costs that will be incurred by the claimant to implement the alleged mandate, including direct and indirect costs;

(C) describe new activities performed to implement specified provisions of the new statute or executive order alleged to impose a reimbursable state-mandated program (specific references shall be made to chapters, articles, sections, or page numbers alleged to impose a reimbursable state-mandated program); and

(D) are signed under penalty of perjury, based on the declarant's personal knowledge, information or belief, by persons who are authorized and competent to do so.

7. DOCUMENTATION

Under the heading "7. Documention, " support the written narrative with copies of all of the following:

(A) the test claim statute that includes the bill number alleged to impose or impact a mandate; and/or

(B) the executive order, identified by its effective date, alleged to impose or impact a mandate; and

(C) relevant portions of state constitutional provisions, federal statutes, and executive orders that may impact the alleged mandate; and

(D) administrative decisions and court decisions cited in the narrative. Published court decisions arising from a state mandate determination by the Board of Control or the Commission are exempt from this requirement.

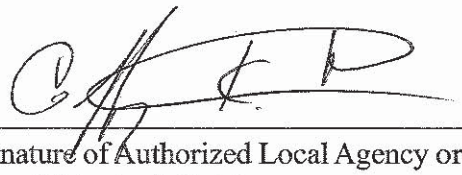
8. CLAIM CERTIFICATION

*Read, sign, and date this section and insert at the end of the test claim submission.**

This test claim alleges the existence of a reimbursable state-mandated program within the meaning of article XIII B, section 6 of the California Constitution and Government Code section 17514. I hereby declare, under penalty of perjury under the laws of the State of California, that the information in this test claim submission is true and complete to the best of my own knowledge or information or belief.

Geoffrey K. Hunt
Print or Type Name of Authorized Local Agency or School District Official

Supervising Deputy County Counsel
Print or Type Title



Signature of Authorized Local Agency or School District Official

6/28/2010
Date

** If the declarant for this Claim Certification is different from the Claimant contact identified in section 2 of the test claim form, please provide the declarant's address, telephone number, fax number, and e-mail address below.*

Geoffrey K. Hunt
County of Orange, County Counsel
10 Civic Center Plaza
P.O. Box 1379
Santa Ana, CA 92702-1379
Tel: (714) 834-3306
Fax: (714) 834-2359
Geoff.Hunt@coco.ocgov.com

COMMISSION ON STATE MANDATES
TEST CLAIM FORM

Authorized by Government Code section 17553
(Revised 1/2005)

GENERAL INSTRUCTIONS

- ☐ Local agency and school district test claims shall be filed not later than 12 months following the effective date of a statute or executive order, or within 12 months of incurring increased costs as a result of a statute or executive order, whichever is later.
- ☐ Type all responses.
- ☐ Complete sections 1 through 8, as indicated. Failure to complete any of these sections will result in this test claim being returned as incomplete.
- ☐ Original test claim submissions shall be unbound, single-sided, and without tabs. Copies may be double-sided, but unbound and without tabs.
- ☐ Mail, or hand-deliver, one original and seven copies of your test claim submission to:

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980 Ninth Street, Suite 300
Sacramento, CA 95814

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You may download this form from our website! If you have any questions, please contact us:

Web Site: www.csm.ca.gov
Telephone: (916) 323-3562
Fax: (916) 445-0278
E-Mail: csminfo@csm.ca.gov

1. TEST CLAIM TITLE

~~California Regional Water Quality Control Board,~~
Santa Ana Region, Order No. R8-2009-0030

2. CLAIMANT INFORMATION

City of Anaheim
Name of Local Agency or School District

Cristina L. Talley
Claimant Contact

City Attorney
Title

200 S. Anaheim Boulevard #356
Street Address

Anaheim, CA 92805
City, State, Zip

714-765-5169
Telephone Number

714-765-5823
Fax Number

CTalley@anaheim.net
E-Mail Address

3. CLAIMANT REPRESENTATIVE INFORMATION

Claimant designates the following person to act as its sole representative in this test claim. All correspondence and communications regarding this claim shall be forwarded to this representative. Any change in representation must be authorized by the claimant in writing, and sent to the Commission on State Mandates.

Keith Linker
Claimant Representative Name

Principal Civil Engineer
Title

Public Works, City of Anaheim
Organization

200 S. Anaheim Boulevard
Street Address

Anaheim, CA 92805
City, State, Zip

714-765-5148
Telephone Number

714-765-5225
Fax Number

KLinker@anaheim.net
E-Mail Address

For CSM Use Only
Filing Date:
Test Claim #:

4. TEST CLAIM STATUTES OR EXECUTIVE ORDERS CITED

Please identify all code sections, statutes, bill numbers, regulations, and/or executive orders that impose the alleged mandate (e.g., Penal Code Section 2045, Statutes 2004, Chapter 54 [AB 290]). When alleging regulations or executive orders, please include the effective date of each one.

California Regional Water Quality Control Board, Santa Ana Region, Order No. R8-2009-0030 (NPDES No. CAS618030)

Effective June 1, 2009

☐ *Copies of all statutes and executive orders cited are attached.*

Sections 5, 6, and 7 are attached as follows:

5. Written Narrative: pages _____ to _____.
6. Declarations: pages _____ to _____.
7. Documentation: pages _____ to _____.

Sections 5, 6, and 7 should be answered on separate sheets of plain 8-1/2 x 11 paper. Each sheet should include the test claim name, the claimant, the section number, and heading at the top of each page.

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Under the heading "5. Written Narrative," please identify the specific sections of statutes or executive orders alleged to contain a mandate.

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(F) Identification of all of the following funding sources available for this program:
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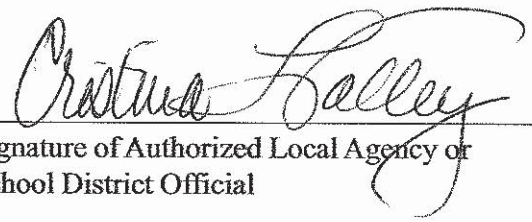
Cristina L. Talley, City of Anaheim
Print or Type Name of Authorized Local Agency or School District Official

City Attorney, City of Anaheim
Print or Type Title



Signature of Authorized Local Agency or School District Official

6-24-2010
Date

** If the declarant for this Claim Certification is different from the Claimant contact identified in section 2 of the test claim form, please provide the declarant's address, telephone number, fax number, and e-mail address below.*

COMMISSION ON STATE MANDATES
TEST CLAIM FORM

Authorized by Government Code section 17553
(Revised 1/2005)

GENERAL INSTRUCTIONS

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Fax:	(916) 445-0278
E-Mail:	csminfo@csm.ca.gov

1. TEST CLAIM TITLE

~~California Regional Water Quality Control Board,~~
Santa Ana Region, Order No. R8-2009-0030

2. CLAIMANT INFORMATION

City of Brea
Name of Local Agency or School District

Charlie View
Claimant Contact

Director of Public Works
Title

1 Civic Center Circle
Street Address

Brea, CA 92821
City, State, Zip

714-990-7698
Telephone Number

714-990-2258
Fax Number

CharlieV@ci.brea.ca.us
E-Mail Address

3. CLAIMANT REPRESENTATIVE INFORMATION

Claimant designates the following person to act as its sole representative in this test claim. All correspondence and communications regarding this claim shall be forwarded to this representative. Any change in representation must be authorized by the claimant in writing, and sent to the Commission on State Mandates.

Candice K. Lee
Claimant Representative Name

Deputy City Attorney
Title

Richards, Watson & Gershon
Organization

355 S. Grand Ave, 40th Floor
Street Address

Los Angeles, California 90071-3101
City, State, Zip

213-626-8484
Telephone Number

213-626-0078
Fax Number

clee@rwglaw.com
E-Mail Address

For CSM Use Only
Filing Date:
Test Claim #:

4. TEST CLAIM STATUTES OR EXECUTIVE ORDERS CITED

Please identify all code sections, statutes, bill numbers, regulations, and/or executive orders that impose the alleged mandate (e.g., Penal Code Section 2045, Statutes 2004, Chapter 54 [AB 290]). When alleging regulations or executive orders, please include the effective date of each one.

California Regional Water Quality Control Board, Santa Ana Region, Order No. R8-2009-0030 (NPDES No. CAS618030)

☐ *Copies of all statutes and executive orders cited are attached.*

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8. CLAIM CERTIFICATION

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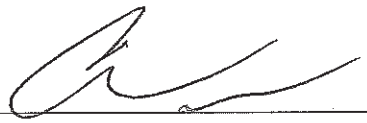
This test claim alleges the existence of a reimbursable state-mandated program within the meaning of article XIII B, section 6 of the California Constitution and Government Code section 17514. I hereby declare, under penalty of perjury under the laws of the State of California, that the information in this test claim submission is true and complete to the best of my own knowledge or information or belief.

City of Brea
Print or Type Name of Authorized Local Agency or School District Official

Director of Public Works
Print or Type Title



Signature of Authorized Local Agency or School District Official

6/23/10
Date

** If the declarant for this Claim Certification is different from the Claimant contact identified in section 2 of the test claim form, please provide the declarant's address, telephone number, fax number, and e-mail address below.*

COMMISSION ON STATE MANDATES
TEST CLAIM FORM

Authorized by Government Code section 17553
(Revised 1/2005)

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Telephone:	(916) 323-3562
Fax:	(916) 445-0278
E-Mail:	csminfo@csm.ca.gov

1. TEST CLAIM TITLE

~~California Regional Water Quality Control Board,~~ Santa Ana Region, Order No. R8-2009-0030

2. CLAIMANT INFORMATION

City of Buena Park
Name of Local Agency or School District

James A. Biery
Claimant Contact

Director of Public Works
Title

6650 Beach Boulevard
Street Address

Buena Park, CA, 90620
City, State, Zip

714 562-3670
Telephone Number

714 562-3677
Fax Number

jbiery@buenapark.com
E-Mail Address

3. CLAIMANT REPRESENTATIVE INFORMATION

Claimant designates the following person to act as its sole representative in this test claim. All correspondence and communications regarding this claim shall be forwarded to this representative. Any change in representation must be authorized by the claimant in writing, and sent to the Commission on State Mandates.

Candice K. Lee
Claimant Representative Name

Deputy City Attorney
Title

Richards, Watson & Gershon
Organization

355 S. Grand Avenue, 40th Floor
Street Address

Los Angeles, CA, 90071-3101
City, State, Zip

213 626-8484
Telephone Number

213 626-0078
Fax Number

clee@rwglaw.com
E-Mail Address

For CSM Use Only
Filing Date:
Test Claim #:

4. TEST CLAIM STATUTES OR EXECUTIVE ORDERS CITED

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California Regional Water Quality Control Board, Santa Ana Region, Order No. R8-2009-0030 (NPDES No. CAS618030)

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6. Declarations: pages _____ to _____.
7. Documentation: pages _____ to _____.

Sections 5, 6, and 7 should be answered on separate sheets of plain 8-1/2 x 11 paper. Each sheet should include the test claim name, the claimant, the section number, and heading at the top of each page.

5. WRITTEN NARRATIVE

Under the heading "5. Written Narrative," please identify the specific sections of statutes or executive orders alleged to contain a mandate.

Include a statement that actual and/or estimated costs resulting from the alleged mandate exceeds one thousand dollars ($1,000), and include all of the following elements for each statute or executive order alleged:

(A) A detailed description of the new activities and costs that arise from the mandate.

(B) A detailed description of existing activities and costs that are modified by the mandate.

(C) The actual increased costs incurred by the claimant during the fiscal year for which the claim was filed to implement the alleged mandate.

(D) The actual or estimated annual costs that will be incurred by the claimant to implement the alleged mandate during the fiscal year immediately following the fiscal year for which the claim was filed.

(E) A statewide cost estimate of increased costs that all local agencies or school districts will incur to implement the alleged mandate during the fiscal year immediately following the fiscal year for which the claim was filed.

(F) Identification of all of the following funding sources available for this program:
- (i) Dedicated state funds
- (ii) Dedicated federal funds
- (iii) Other nonlocal agency funds
- (iv) The local agency's general purpose funds
- (v) Fee authority to offset costs

(G) Identification of prior mandate determinations made by the Board of Control or the Commission on State Mandates that may be related to the alleged mandate.

6. DECLARATIONS

Under the heading "6. Declarations," support the written narrative with declarations that:

(A) declare actual or estimated increased costs that will be incurred by the claimant to implement the alleged mandate;

(B) identify all local, state, or federal funds, and fee authority that may be used to offset the increased costs that will be incurred by the claimant to implement the alleged mandate, including direct and indirect costs;

(C) describe new activities performed to implement specified provisions of the new statute or executive order alleged to impose a reimbursable state-mandated program (specific references shall be made to chapters, articles, sections, or page numbers alleged to impose a reimbursable state-mandated program); and

(D) are signed under penalty of perjury, based on the declarant's personal knowledge, information or belief, by persons who are authorized and competent to do so.

7. DOCUMENTATION

Under the heading "7. Documention, " support the written narrative with copies of all of the following:

(A) the test claim statute that includes the bill number alleged to impose or impact a mandate; and/or

(B) the executive order, identified by its effective date, alleged to impose or impact a mandate; and

(C) relevant portions of state constitutional provisions, federal statutes, and executive orders that may impact the alleged mandate; and

(D) administrative decisions and court decisions cited in the narrative. Published court decisions arising from a state mandate determination by the Board of Control or the Commission are exempt from this requirement.

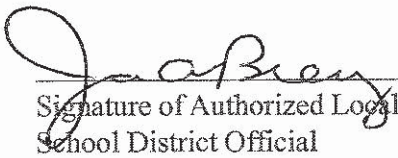
8. CLAIM CERTIFICATION

*Read, sign, and date this section and insert at the end of the test claim submission.**

This test claim alleges the existence of a reimbursable state-mandated program within the meaning of article XIII B, section 6 of the California Constitution and Government Code section 17514. I hereby declare, under penalty of perjury under the laws of the State of California, that the information in this test claim submission is true and complete to the best of my own knowledge or information or belief.

James A. Biery
Print or Type Name of Authorized Local Agency or School District Official

Director of Public Works
Print or Type Title


Signature of Authorized Local Agency or School District Official

June 24, 2010
Date

** If the declarant for this Claim Certification is different from the Claimant contact identified in section 2 of the test claim form, please provide the declarant's address, telephone number, fax number, and e-mail address below.*

COMMISSION ON STATE MANDATES
TEST CLAIM FORM

Authorized by Government Code section 17553
(Revised 1/2005)

GENERAL INSTRUCTIONS

- ☐ Local agency and school district test claims shall be filed not later than 12 months following the effective date of a statute or executive order, or within 12 months of incurring increased costs as a result of a statute or executive order, whichever is later.
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- ☐ Original test claim submissions shall be unbound, single-sided, and without tabs. Copies may be double-sided, but unbound and without tabs.
- ☐ Mail, or hand-deliver, one original and seven copies of your test claim submission to:

Commission on State Mandates
980 Ninth Street, Suite 300
Sacramento, CA 95814

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You may download this form from our website! If you have any questions, please contact us:

Web Site:	www.csm.ca.gov
Telephone:	(916) 323-3562
Fax:	(916) 445-0278
E-Mail:	csminfo@csm.ca.gov

1. TEST CLAIM TITLE

~~California Regional Water Quality Control Board,~~ Santa Ana Region, Order No. R8-2009-0030

2. CLAIMANT INFORMATION

City of Costa Mesa
Name of Local Agency or School District

Peter Naghavi
Claimant Contact

Director, Department of Public Services
Title

77 Fair Drive
Street Address

Costa Mesa, CA 92628
City, State, Zip

714-754-5343
Telephone Number

714-754-5028
Fax Number

pnaghavi@ci.costa-mesa.ca.us
E-Mail Address

3. CLAIMANT REPRESENTATIVE INFORMATION

Claimant designates the following person to act as its sole representative in this test claim. All correspondence and communications regarding this claim shall be forwarded to this representative. Any change in representation must be authorized by the claimant in writing, and sent to the Commission on State Mandates.

Kimberly Hall-Barlow
Claimant Representative Name

City Attorney
Title

Jones and Mayer
Organization

3777 N. Harbor Blvd
Street Address

Fullerton, CA 92835-1336
City, State, Zip

714-754-5399
Telephone Number

714-446-1448
Fax Number

khb@jones-mayer.com
E-Mail Address

For CSM Use Only
Filing Date:
Test Claim #:

4. TEST CLAIM STATUTES OR EXECUTIVE ORDERS CITED

Please identify all code sections, statutes, bill numbers, regulations, and/or executive orders that impose the alleged mandate (e.g., Penal Code Section 2045, Statutes 2004, Chapter 54 [AB 290]). When alleging regulations or executive orders, please include the effective date of each one.

California Regional Water Quality Control Board, Santa Ana Region, Order No. R8-2009-0030 (NPDES No. CAS618030)

☐ *Copies of all statutes and executive orders cited are attached.*

Sections 5, 6, and 7 are attached as follows:

5. Written Narrative: pages _____ to _____.
6. Declarations: pages _____ to _____.
7. Documentation: pages _____ to _____.

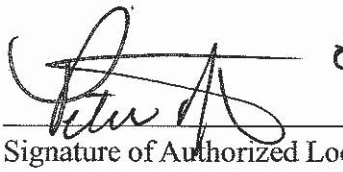
8. CLAIM CERTIFICATION

*Read, sign, and date this section and insert at the end of the test claim submission.**

This test claim alleges the existence of a reimbursable state-mandated program within the meaning of article XIII B, section 6 of the California Constitution and Government Code section 17514. I hereby declare, under penalty of perjury under the laws of the State of California, that the information in this test claim submission is true and complete to the best of my own knowledge or information or belief.

Peter Naghavi
Print or Type Name of Authorized Local Agency or School District Official

Director, Department of Public Services
Print or Type Title



Signature of Authorized Local Agency or School District Official

6.23.10
Date

** If the declarant for this Claim Certification is different from the Claimant contact identified in section 2 of the test claim form, please provide the declarant's address, telephone number, fax number, and e-mail address below.*

1. TEST CLAIM TITLE

~~California Regional Water Quality Control Board,~~ Santa Ana Region, Order No. R8-2009-0030

2. CLAIMANT INFORMATION

City of Cypress
Name of Local Agency or School District

Gonzalo M. Vazquez
Claimant Contact

Water Quality Manager
Title

5275 Orange Avenue
Street Address

Cypress, CA 90630
City, State, Zip

714 229-6752
Telephone Number

714 229-0154
Fax Number

gvazquez@ci.cypress.ca.us
E-Mail Address

3. CLAIMANT REPRESENTATIVE INFORMATION

Claimant designates the following person to act as its sole representative in this test claim. All correspondence and communications regarding this claim shall be forwarded to this representative. Any change in representation must be authorized by the claimant in writing, and sent to the Commission on State Mandates.

Gonzalo M. Vazquez
Claimant Representative Name

Water Quality Manager
Title

City of Cypress - Department of Public Works
Organization

5275 Orange Avenue
Street Address

Cypress, CA 90630
City, State, Zip

714 229-6752
Telephone Number

714 229-0154
Fax Number

gvazquez@ci.cypress.ca.us
E-Mail Address

For CSM Use Only
Filing Date:
Test Claim #:

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California Regional Water Quality Control Board, Santa Ana Region, Order No. R8-2009-0030 (NPDES No. CAS618030)

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- (iv) The local agency's general purpose funds
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(G) Identification of prior mandate determinations made by the Board of Control or the Commission on State Mandates that may be related to the alleged mandate.

6. DECLARATIONS

Under the heading "6. Declarations," support the written narrative with declarations that:

(A) declare actual or estimated increased costs that will be incurred by the claimant to implement the alleged mandate;

(B) identify all local, state, or federal funds, and fee authority that may be used to offset the increased costs that will be incurred by the claimant to implement the alleged mandate, including direct and indirect costs;

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*Read, sign, and date this section and insert at the end of the test claim submission.**

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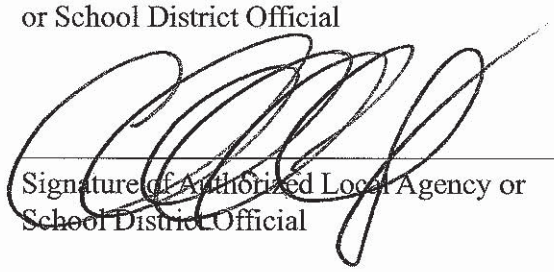
Gonzalo M. Vazquez
Print or Type Name of Authorized Local Agency or School District Official

Water Quality Manager
Print or Type Title



Signature of Authorized Local Agency or School District Official

June 24, 2010
Date

** If the declarant for this Claim Certification is different from the Claimant contact identified in section 2 of the test claim form, please provide the declarant's address, telephone number, fax number, and e-mail address below.*

COMMISSION ON STATE MANDATES
TEST CLAIM FORM

Authorized by Government Code section 17553
(Revised 1/2005)

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Fax:	(916) 445-0278
E-Mail:	csminfo@csm.ca.gov

1. TEST CLAIM TITLE

~~California Regional Water Quality Control Board,~~ Santa Ana Region, Order No. R8-2009-0030

2. CLAIMANT INFORMATION

City of Fountain Valley
Name of Local Agency or School District

Steven M. Hauerwaas
Claimant Contact

Environmental Services Administrator
Title

10200 Slater Avenue
Street Address

Fountain Valley, CA 92708-4736
City, State, Zip

(714) 593-4441
Telephone Number

(714) 593-4554
Fax Number

steve.hauerwaas@fountainvalley.org
E-Mail Address

3. CLAIMANT REPRESENTATIVE INFORMATION

Claimant designates the following person to act as its sole representative in this test claim. All correspondence and communications regarding this claim shall be forwarded to this representative. Any change in representation must be authorized by the claimant in writing, and sent to the Commission on State Mandates.

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Claimant Representative Name

Environmental Services Administrator
Title

City of Fountain Valley
Organization

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Telephone Number

(714) 593-4554
Fax Number

steve.hauerwaas@fountainvalley.org
E-Mail Address

For CSM Use Only
Filing Date:
Test Claim #:

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California Regional Water Quality Control Board, Santa Ana Region, Order No. R8-2009-0030 (NPDES No. CAS618030)

☐ *Copies of all statutes and executive orders cited are attached.*

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Steven M. Hauerwaas
Print or Type Name of Authorized Local Agency or School District Official

Environmental Services Administrator
Print or Type Title

Steven M. Hauerwaas
Signature of Authorized Local Agency or School District Official

June 24, 2010
Date

* *If the declarant for this Claim Certification is different from the Claimant contact identified in section 2 of the test claim form, please provide the declarant's address, telephone number, fax number, and e-mail address below.*

COMMISSION ON STATE MANDATES
TEST CLAIM FORM

Authorized by Government Code section 17553
(Revised 1/2005)

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You may download this form from our website! If you have any questions, please contact us:

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Fax:	(916) 445-0278
E-Mail:	csminfo@csm.ca.gov

1. TEST CLAIM TITLE

~~California Regional Water Quality Control Board,~~ Santa Ana Region, Order No. R8-2009-0030

2. CLAIMANT INFORMATION

City of Fullerton
Name of Local Agency or School District

Trung Phan
Claimant Contact

Stormwater/ Wastewater Compliance Specialist
Title

303 W. Commonwealth Ave.
Street Address

Fullerton, CA 92832
City, State, Zip

714-738-5333
Telephone Number

714-738-3115
Fax Number

trungp@cityoffullerton.com
E-Mail Address

3. CLAIMANT REPRESENTATIVE INFORMATION

Claimant designates the following person to act as its sole representative in this test claim. All correspondence and communications regarding this claim shall be forwarded to this representative. Any change in representation must be authorized by the claimant in writing, and sent to the Commission on State Mandates.

Kimberly Hall Barlow
Claimant Representative Name

Attorney
Title

Jones and Mayer
Organization

3777 N. Harbor Blvd.
Street Address

Fullerton, CA 92835
City, State, Zip

714-446-1400
Telephone Number

714-446-1448
Fax Number

khb@jones-mayer.com
E-Mail Address

For CSM Use Only
Filing Date:
Test Claim #:

4. TEST CLAIM STATUTES OR EXECUTIVE ORDERS CITED

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California Regional Water Quality Control Board, Santa Ana Region, Order No. R8-2009-0030 (NPDES No. CAS618030)

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Chris Meyer
Print or Type Name of Authorized Local Agency or School District Official

City Manager
Print or Type Title

Signature of Authorized Local Agency or School District Official

6/24/2010
Date

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TEST CLAIM FORM

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Sacramento, CA 95814

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You may download this form from our website! If you have any questions, please contact us:

Web Site:	www.csm.ca.gov
Telephone:	(916) 323-3562
Fax:	(916) 445-0278
E-Mail:	csminfo@csm.ca.gov

1. TEST CLAIM TITLE

~~California Regional Water Quality Control Board,~~ Santa Ana Region, Order No. R8-2009-0030

2. CLAIMANT INFORMATION

City of Huntington Beach
Name of Local Agency or School District

Travis K. Hopkins
Claimant Contact

Director of Public Works
Title

2000 Main Street
Street Address

Huntington Beach, CA 92648
City, State, Zip

714-536-5437
Telephone Number

714-374-1573
Fax Number

THopkins@surfcity-hb.org
E-Mail Address

3. CLAIMANT REPRESENTATIVE INFORMATION

Claimant designates the following person to act as its sole representative in this test claim. All correspondence and communications regarding this claim shall be forwarded to this representative. Any change in representation must be authorized by the claimant in writing, and sent to the Commission on State Mandates.

Michael Vigliotta
Claimant Representative Name

Deputy City Attorney
Title

City of Huntington Beach
Organization

2000 Main Street
Street Address

Huntington Beach, CA 92648
City, State, Zip

714-536-5555
Telephone Number

714-374-1590
Fax Number

MVigliotta@surfcity-hb.org
E-Mail Address

For CSM Use Only
Filing Date:
Test Claim #:

4. TEST CLAIM STATUTES OR EXECUTIVE ORDERS CITED

Please identify all code sections, statutes, bill numbers, regulations, and/or executive orders that impose the alleged mandate (e.g., Penal Code Section 2045, Statutes 2004, Chapter 54 [AB 290]). When alleging regulations or executive orders, please include the effective date of each one.

California Regional Water Quality Control Board, Santa Ana Region, Order No. R8-2009-0030 (NPDES No. CAS618030)

☐ *Copies of all statutes and executive orders cited are attached.*

Sections 5, 6, and 7 are attached as follows:

5. Written Narrative: pages _____ to _____.
6. Declarations: pages _____ to _____.
7. Documentation: pages _____ to _____.

Sections 5, 6, and 7 should be answered on separate sheets of plain 8-1/2 x 11 paper. Each sheet should include the test claim name, the claimant, the section number, and heading at the top of each page.

5. WRITTEN NARRATIVE

Under the heading "5. Written Narrative," please identify the specific sections of statutes or executive orders alleged to contain a mandate.

Include a statement that actual and/or estimated costs resulting from the alleged mandate exceeds one thousand dollars ($1,000), and include all of the following elements for each statute or executive order alleged:

(A) A detailed description of the new activities and costs that arise from the mandate.

(B) A detailed description of existing activities and costs that are modified by the mandate.

(C) The actual increased costs incurred by the claimant during the fiscal year for which the claim was filed to implement the alleged mandate.

(D) The actual or estimated annual costs that will be incurred by the claimant to implement the alleged mandate during the fiscal year immediately following the fiscal year for which the claim was filed.

(E) A statewide cost estimate of increased costs that all local agencies or school districts will incur to implement the alleged mandate during the fiscal year immediately following the fiscal year for which the claim was filed.

(F) Identification of all of the following funding sources available for this program:
- (i) Dedicated state funds
- (ii) Dedicated federal funds
- (iii) Other nonlocal agency funds
- (iv) The local agency's general purpose funds
- (v) Fee authority to offset costs

(G) Identification of prior mandate determinations made by the Board of Control or the Commission on State Mandates that may be related to the alleged mandate.

6. DECLARATIONS

Under the heading "6. Declarations," support the written narrative with declarations that:

(A) declare actual or estimated increased costs that will be incurred by the claimant to implement the alleged mandate;

(B) identify all local, state, or federal funds, and fee authority that may be used to offset the increased costs that will be incurred by the claimant to implement the alleged mandate, including direct and indirect costs;

(C) describe new activities performed to implement specified provisions of the new statute or executive order alleged to impose a reimbursable state-mandated program (specific references shall be made to chapters, articles, sections, or page numbers alleged to impose a reimbursable state-mandated program); and

(D) are signed under penalty of perjury, based on the declarant's personal knowledge, information or belief, by persons who are authorized and competent to do so.

7. DOCUMENTATION

Under the heading "7. Documention, " support the written narrative with copies of all of the following:

(A) the test claim statute that includes the bill number alleged to impose or impact a mandate; and/or

(B) the executive order, identified by its effective date, alleged to impose or impact a mandate; and

(C) relevant portions of state constitutional provisions, federal statutes, and executive orders that may impact the alleged mandate; and

(D) administrative decisions and court decisions cited in the narrative. Published court decisions arising from a state mandate determination by the Board of Control or the Commission are exempt from this requirement.

8. CLAIM CERTIFICATION

*Read, sign, and date this section and insert at the end of the test claim submission.**

This test claim alleges the existence of a reimbursable state-mandated program within the meaning of article XIII B, section 6 of the California Constitution and Government Code section 17514. I hereby declare, under penalty of perjury under the laws of the State of California, that the information in this test claim submission is true and complete to the best of my own knowledge or information or belief.

Travis K. Hopkins
Print or Type Name of Authorized Local Agency or School District Official

Director of Public Works
Print or Type Title


Signature of Authorized Local Agency or School District Official

6-24-2010
Date

** If the declarant for this Claim Certification is different from the Claimant contact identified in section 2 of the test claim form, please provide the declarant's address, telephone number, fax number, and e-mail address below.*

COMMISSION ON STATE MANDATES
TEST CLAIM FORM

Authorized by Government Code section 17553
(Revised 1/2005)

GENERAL INSTRUCTIONS

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Fax:	(916) 445-0278
E-Mail:	csminfo@csm.ca.gov

1. TEST CLAIM TITLE

In Re: California Regional Water Quality Control Board
Santa Ana Region, Order No. R8-2009-0030

2. CLAIMANT INFORMATION

City of Irvine
Name of Local Agency or School District

Eric Tolles
Claimant Contact

Deputy Director of Community Development
Title

One Civic Center Plaza
Street Address

Irvine, California 92623-9575
City, State, Zip

(949) 724-6453
Telephone Number

(949) 724-6444
Fax Number

etolles@ci.irvine.ca.us
E-Mail Address

3. CLAIMANT REPRESENTATIVE INFORMATION

Claimant designates the following person to act as its sole representative in this test claim. All correspondence and communications regarding this claim shall be forwarded to this representative. Any change in representation must be authorized by the claimant in writing, and sent to the Commission on State Mandates.

Richard Montevideo
Claimant Representative Name

Attorney at Law
Title

Rutan & Tucker, LLP
Organization

611 Anton Blvd., Suite 1400
Street Address

Costa Mesa, CA 92626
City, State, Zip

(714) 641-5100
Telephone Number

(714) 546-9035
Fax Number

rmontevideo@rutan.com
E-Mail Address

For CSM Use Only
Filing Date:
Test Claim #:

4. TEST CLAIM STATUTES OR EXECUTIVE ORDERS CITED

Please identify all code sections, statutes, bill numbers, regulations, and/or executive orders that impose the alleged mandate (e.g., Penal Code Section 2045, Statutes 2004, Chapter 54 [AB 290]). When alleging regulations or executive orders, please include the effective date of each one.

California Regional Water Quality Control Board, Santa Ana Region, Order No. R8-2009-0030 (NPDES No. CAS618030)

☑ *Copies of all statutes and executive orders cited are attached.*

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8. CLAIM CERTIFICATION

*Read, sign, and date this section and insert at the end of the test claim submission.**

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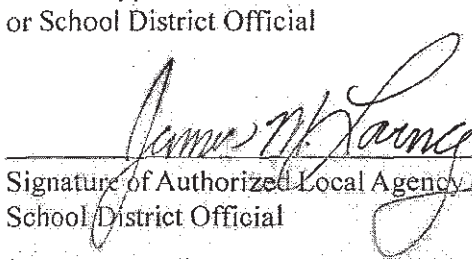
James M. Loving
Print or Type Name of Authorized Local Agency or School District Official

Water Quality Administrator
Print or Type Title



Signature of Authorized Local Agency or School District Official

June 24, 2010
Date

** If the declarant for this Claim Certification is different from the Claimant contact identified in section 2 of the test claim form, please provide the declarant's address, telephone number, fax number, and e-mail address below.*

James M. Loving
City of Irvine
One Civic Center Plaza
Irvine, CA 92623
Phone: (949) 724-6315
Fax: (949) 724-6440
mloving@ci.irvine.ca.us

COMMISSION ON STATE MANDATES
TEST CLAIM FORM

Authorized by Government Code section 17553
(Revised 1/2005)

GENERAL INSTRUCTIONS

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1. TEST CLAIM TITLE

~~California Regional Water Quality Control Board,~~
Santa Ana Region, Order No. R8-2009-0030

2. CLAIMANT INFORMATION

City of Lake Forest
Name of Local Agency or School District

Robert L. Woodings, P.E.
Claimant Contact

Director of Public Works/City Engineer
Title

25550 Commercentre Dr., Suite 100
Street Address

Lake Forest, CA 92630
City, State, Zip

949-461-3480
Telephone Number

949-461-3511
Fax Number

rwoodings@lakeforestca.gov
E-Mail Address

3. CLAIMANT REPRESENTATIVE INFORMATION

Claimant designates the following person to act as its sole representative in this test claim. All correspondence and communications regarding this claim shall be forwarded to this representative. Any change in representation must be authorized by the claimant in writing, and sent to the Commission on State Mandates.

Andre Monette, Esq.
Claimant Representative Name

Special Counsel
Title

Best Best & Krieger, LLP
Organization

655 West Broadway
Street Address

San Diego, CA 92101
City, State, Zip

619-525-1300
Telephone Number

619-233-6118
Fax Number

andre.monette@bbklaw.com
E-Mail Address

For CSM Use Only
Filing Date:
Test Claim #:

4. TEST CLAIM STATUTES OR EXECUTIVE ORDERS CITED

Please identify all code sections, statutes, bill numbers, regulations, and/or executive orders that impose the alleged mandate (e.g., Penal Code Section 2045, Statutes 2004, Chapter 54 [AB 290]). When alleging regulations or executive orders, please include the effective date of each one.

California Regional Water Quality Control Board, Santa Ana Region, Order No. R8-2009-0030 (NPDES No. CAS618030)

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- (iv) The local agency's general purpose funds
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(G) Identification of prior mandate determinations made by the Board of Control or the Commission on State Mandates that may be related to the alleged mandate.

6. DECLARATIONS

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8. CLAIM CERTIFICATION

*Read, sign, and date this section and insert at the end of the test claim submission.**

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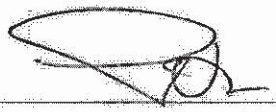
Robert L. Woodings, P.E.
Print or Type Name of Authorized Local Agency or School District Official

Director of Public Works/City Engineer
Print or Type Title



Signature of Authorized Local Agency or School District Official

June 24, 2010
Date

** If the declarant for this Claim Certification is different from the Claimant contact identified in section 2 of the test claim form, please provide the declarant's address, telephone number, fax number, and e-mail address below.*

COMMISSION ON STATE MANDATES
TEST CLAIM FORM

Authorized by Government Code section 17553
(Revised 1/2005)

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1. TEST CLAIM TITLE

~~California Regional Water Quality Control Board,~~ Santa Ana Region, Order No. R8-2009-0030

2. CLAIMANT INFORMATION

CITY OF NEWPORT BEACH
Name of Local Agency or School District

DAVE KIFF
Claimant Contact

CITY MANAGER
Title

3300 NEWPORT BLVD
Street Address

NEWPORT BEACH, CA, 92663
City, State, Zip

(949) 644-3000
Telephone Number

(949) 644-3020
Fax Number

dkiff@newportbeachca.gov
E-Mail Address

3. CLAIMANT REPRESENTATIVE INFORMATION

Claimant designates the following person to act as its sole representative in this test claim. All correspondence and communications regarding this claim shall be forwarded to this representative. Any change in representation must be authorized by the claimant in writing, and sent to the Commission on State Mandates.

DAVID WEBB
Claimant Representative Name

DEPUTY PUBLIC WORKS DIRECTOR
Title

CITY OF NEWPORT BEACH
Organization

3300 NEWPORT BLVD., BUILDING C
Street Address

NEWPORT BEACH, CA, 92663
City, State, Zip

(949) 644-3328
Telephone Number

(949) 644-3318
Fax Number

dwebb@newportbeachca.gov
E-Mail Address

For CSM Use Only
Filing Date:
Test Claim #:

4. TEST CLAIM STATUTES OR EXECUTIVE ORDERS CITED

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DAVID WEBB
Print or Type Name of Authorized Local Agency or School District Official

DEPUTY PUBLIC WORKS DIRECTOR
Print or Type Title

Signature of Authorized Local Agency or School District Official

JUNE 24, 2010
Date

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DAVID WEBB
PUBLIC WORKS
CITY OF NEWPORT BEACH
3300 NEWPORT BLVD., BUILDING C
NEWPORT BEACH, CA 92663
(949) 644-3328
FAX (949) 644-3318
dwebb@newportbeachca.gov

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TEST CLAIM FORM

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Sacramento, CA 95814

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You may download this form from our website! If you have any questions, please contact us:

Web Site:	www.csm.ca.gov
Telephone:	(916) 323-3562
Fax:	(916) 445-0278
E-Mail:	csminfo@csm.ca.gov

1. TEST CLAIM TITLE

California Regional Water Quality Control Board, Santa Ana Region, Order No. R8-2009-0030

2. CLAIMANT INFORMATION

City of Placentia
Name of Local Agency or School District

Robert Makowski
Claimant Contact

Environmental Compliance Manager
Title

401 E. Chapman Ave.
Street Address

Placentia, CA., 92870
City, State, Zip

(714) 993-8131
Telephone Number

(714) 961-0283
Fax Number

rmakowski@placenti.org
E-Mail Address

3. CLAIMANT REPRESENTATIVE INFORMATION

Claimant designates the following person to act as its sole representative in this test claim. All correspondence and communications regarding this claim shall be forwarded to this representative. Any change in representation must be authorized by the claimant in writing, and sent to the Commission on State Mandates.

Robert Makowski
Claimant Representative Name

Environmental Compliance Officer
Title

City of Placentia
Organization

401 E. Chapman Ave.
Street Address

Placentia, CA., 92870
City, State, Zip

(714) 993-8131
Telephone Number

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Fax Number

rmakowski@placentia.org
E-Mail Address

For CSM Use Only
Filing Date:
Test Claim #:

4. TEST CLAIM STATUTES OR EXECUTIVE ORDERS CITED

Please identify all code sections, statutes, bill numbers, regulations, and/or executive orders that impose the alleged mandate (e.g., Penal Code Section 2045, Statutes 2004, Chapter 54 [AB 290]). When alleging regulations or executive orders, please include the effective date of each one.

California Regional Water Quality Control Board, Santa Ana Region, Order No. R8-2009-0030 (NPDES No. CAS618030)

☐ *Copies of all statutes and executive orders cited are attached.*

Sections 5, 6, and 7 are attached as follows:

5. Written Narrative: pages _____ to _____.
6. Declarations: pages _____ to _____.
7. Documentation: pages _____ to _____.

Sections 5, 6, and 7 should be answered on separate sheets of plain 8-1/2 x 11 paper. Each sheet should include the test claim name, the claimant, the section number, and heading at the top of each page.

5. WRITTEN NARRATIVE

Under the heading "5. Written Narrative," please identify the specific sections of statutes or executive orders alleged to contain a mandate.

Include a statement that actual and/or estimated costs resulting from the alleged mandate exceeds one thousand dollars ($1,000), and include all of the following elements for each statute or executive order alleged:

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(B) A detailed description of existing activities and costs that are modified by the mandate.

(C) The actual increased costs incurred by the claimant during the fiscal year for which the claim was filed to implement the alleged mandate.

(D) The actual or estimated annual costs that will be incurred by the claimant to implement the alleged mandate during the fiscal year immediately following the fiscal year for which the claim was filed.

(E) A statewide cost estimate of increased costs that all local agencies or school districts will incur to implement the alleged mandate during the fiscal year immediately following the fiscal year for which the claim was filed.

(F) Identification of all of the following funding sources available for this program:
- (i) Dedicated state funds
- (ii) Dedicated federal funds
- (iii) Other nonlocal agency funds
- (iv) The local agency's general purpose funds
- (v) Fee authority to offset costs

(G) Identification of prior mandate determinations made by the Board of Control or the Commission on State Mandates that may be related to the alleged mandate.

6. DECLARATIONS

Under the heading "6. Declarations," support the written narrative with declarations that:

(A) declare actual or estimated increased costs that will be incurred by the claimant to implement the alleged mandate;

(B) identify all local, state, or federal funds, and fee authority that may be used to offset the increased costs that will be incurred by the claimant to implement the alleged mandate, including direct and indirect costs;

(C) describe new activities performed to implement specified provisions of the new statute or executive order alleged to impose a reimbursable state-mandated program (specific references shall be made to chapters, articles, sections, or page numbers alleged to impose a reimbursable state-mandated program); and

(D) are signed under penalty of perjury, based on the declarant's personal knowledge, information or belief, by persons who are authorized and competent to do so.

7. DOCUMENTATION

Under the heading "7. Documention, " support the written narrative with copies of all of the following:

(A) the test claim statute that includes the bill number alleged to impose or impact a mandate; and/or

(B) the executive order, identified by its effective date, alleged to impose or impact a mandate; and

(C) relevant portions of state constitutional provisions, federal statutes, and executive orders that may impact the alleged mandate; and

(D) administrative decisions and court decisions cited in the narrative. Published court decisions arising from a state mandate determination by the Board of Control or the Commission are exempt from this requirement.

8. CLAIM CERTIFICATION

*Read, sign, and date this section and insert at the end of the test claim submission.**

This test claim alleges the existence of a reimbursable state-mandated program within the meaning of article XIII B, section 6 of the California Constitution and Government Code section 17514. I hereby declare, under penalty of perjury under the laws of the State of California, that the information in this test claim submission is true and complete to the best of my own knowledge or information or belief.

Robert Makowski
Print or Type Name of Authorized Local Agency or School District Official

Environmental Compliance Officer
Print or Type Title

R.M.
Signature of Authorized Local Agency or School District Official

6/24/2010
Date

** If the declarant for this Claim Certification is different from the Claimant contact identified in section 2 of the test claim form, please provide the declarant's address, telephone number, fax number, and e-mail address below.*

COMMISSION ON STATE MANDATES
TEST CLAIM FORM

Authorized by Government Code section 17553
(Revised 1/2005)

GENERAL INSTRUCTIONS

- ☐ Local agency and school district test claims shall be filed not later than 12 months following the effective date of a statute or executive order, or within 12 months of incurring increased costs as a result of a statute or executive order, whichever is later.
- ☐ Type all responses.
- ☐ Complete sections 1 through 8, as indicated. Failure to complete any of these sections will result in this test claim being returned as incomplete.
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Commission on State Mandates
980 Ninth Street, Suite 300
Sacramento, CA 95814

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E-Mail: csminfo@csm.ca.gov

1. TEST CLAIM TITLE

~~California Regional Water Quality Control Board,~~ Santa Ana Region, Order No. R8-2009-0030

2. CLAIMANT INFORMATION

City of Seal Beach
Name of Local Agency or School District

Michael Ho
Claimant Contact

City Engineer
Title

211 Eighth Street
Street Address

Seal Beach, California 90740
City, State, Zip

(562) 431-2527 ext. 1322
Telephone Number

(562) 430-8763
Fax Number

mho@ci.seal-beach.ca.us
E-Mail Address

3. CLAIMANT REPRESENTATIVE INFORMATION

Claimant designates the following person to act as its sole representative in this test claim. All correspondence and communications regarding this claim shall be forwarded to this representative. Any change in representation must be authorized by the claimant in writing, and sent to the Commission on State Mandates.

Candice K. Lee
Claimant Representative Name

Assistant City Attorney
Title

Richards, Watson & Gershon
Organization

355 S. Grand Avenue, 40th Floor
Street Address

Los Angeles, California 90071-3101
City, State, Zip

(213) 626-8484
Telephone Number

(213) 626-0078
Fax Number

clee@rwglaw.com
E-Mail Address

For CSM Use Only
Filing Date:
Test Claim #:

4. TEST CLAIM STATUTES OR EXECUTIVE ORDERS CITED

Please identify all code sections, statutes, bill numbers, regulations, and/or executive orders that impose the alleged mandate (e.g., Penal Code Section 2045, Statutes 2004, Chapter 54 [AB 290]). When alleging regulations or executive orders, please include the effective date of each one.

California Regional Water Quality Control Board, Santa Ana Region, Order No. R8-2009-0030 (NPDES No. CAS618030)

☐ *Copies of all statutes and executive orders cited are attached.*

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Michael Ho
Print or Type Name of Authorized Local Agency or School District Official

City Engineer
Print or Type Title

Signature of Authorized Local Agency or School District Official

6-24-2010
Date

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1. TEST CLAIM TITLE

~~California Regional Water Quality Control Board,~~ Santa Ana Region, Order No. R8-2009-0030

2. CLAIMANT INFORMATION

City of Villa Park
Name of Local Agency or School District

Lori Sassoon
Claimant Contact

City Manager
Title

17855 Santiago Boulevard
Street Address

Villa Park, CA 92861
City, State, Zip

(714) 998-1500
Telephone Number

(714) 998-1508
Fax Number

lsassoon@villapark.org
E-Mail Address

3. CLAIMANT REPRESENTATIVE INFORMATION

Claimant designates the following person to act as its sole representative in this test claim. All correspondence and communications regarding this claim shall be forwarded to this representative. Any change in representation must be authorized by the claimant in writing, and sent to the Commission on State Mandates.

Lori Sassoon
Claimant Representative Name

City Manager
Title

City of Villa Park
Organization

17855 Santiago Boulevard
Street Address

Villa Park, CA 92861
City, State, Zip

(714) 998-1500
Telephone Number

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Fax Number

lsassoon@villapark.org
E-Mail Address

For CSM Use Only
Filing Date:
Test Claim #:

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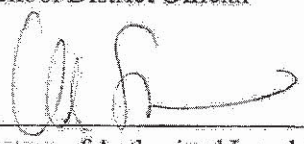
Lori Sassoon
Print or Type Name of Authorized Local Agency or School District Official

City Manager
Print or Type Title



Signature of Authorized Local Agency or School District Official

June 28, 2010
Date

** If the declarant for this Claim Certification is different from the Claimant contact identified in section 2 of the test claim form, please provide the declarant's address, telephone number, fax number, and e-mail address below.*

NARRATIVE STATEMENT

IN SUPPORT OF JOINT TEST CLAIMS IN RE SANTA ANA RWQCB

ORDER NO. R8-2009-0030

(NPDES NO. CAS618030)

TABLE OF CONTENTS

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NARRATIVE STATEMENT IN SUPPORT OF TEST CLAIM

I. INTRODUCTION

On May 22, 2009, the California Water Quality Control Board Santa Ana Region ("Santa Ana RWQCB") issued a new storm water Permit (Order No. R8-2009-0030 (NPDES – "National Pollutant Discharge Elimination System"), NPDES No. CAS618030, hereinafter the "2009 Permit" or "Permit") regulating discharges from the municipal separate storm sewer systems ("MS4s") in north Orange County, California.[1] The 2009 Permit includes numerous requirements that exceed the requirements of federal law and that were not included in the prior 2002 Santa Ana RWQCB MS4 NPDES Permit, Order No. R8-2002-0010, NPDES No. CAS618030 ("2002 Permit").[2] The 2009 Permit is a renewal of the 2002 Permit, and contains a number of new unfunded State mandates for which the County of Orange and the incorporated cities of north Orange County (the "Permittees")[3] are entitled to reimbursement under Article XIII B section 6 of the California Constitution. This Test Claim identifies the activities that are unfunded mandates and sets forth the basis for reimbursement for such activities. These new unfunded programs/activities are described in detail below, but are generally described as follows:

A. A series of new programs involving what are known as "Total Maximium Daily Loads" or "TMDLs" as set forth in Section XVIII of the 2009 Permit (Watershed Action Plans and TMDL Implementation);

B. New "Low Impact Development" or "LID" requirements involving public agency projects as set forth in Subsection XII.C of the Permit;

C. New requirments involving "Hydrologic Conditions of Concern" or "HCOC" concerning Pubic Agency Projects as set forth in Subsection XII.D of the Permit;

D. New Public Education Program requirements involving: common interest areas and areas managed by homeowner associations or management companies (Subsection XI.4 of the Permit), the conducting of a public awareness survey (Subsection XIII.1 of the Permit), the conducting of sector-specific workshops (Subsection XIII.4 of the Permit), and the development and implementation of a new Public Participation program involving various water quality plans and fact sheets (Subsection XIII.7 of the Permit); and

---

[1] A copy of the 2009 Permit is included under Section 7 –Documentation to these Test Claims, along with a copy of the Fact Sheet for the 2009 Permit.

[2] A copy of the 2002 Permit is included under Section 7 –Documentation to these Test Claims.

[3] The Permittees are the County of Orange, the Orange County Flood Control District, and the cities of Anaheim, Brea, Buena Park, Costa Mesa, Cypress, Fountain Valley, Fullerton, Garden Grove, Huntington Beach, Irvine, Laguna Hills, Laguna Woods, La Habra, La Palma, Lake Forest, Los Alamitos, Newport Beach, Orange, Placentia, Santa Ana, Seal Beach, Stanton, Tustin, Villa Park, Westminster, and Yorba Linda.

E. New requirements to develop and maintain a Geographical Information System (GIS) for Industrial Facilities and Newly Specified Commercial Facilities as set forth in Sections IX (Municipal Inspections of Industrial Facilities) and X (Municipal Inspections of Commercial Facilities) of the 2009 Permit.

II. PROGRAM BACKGROUND

California ("State") has long been a leader in protecting the quality of all the waters of the State for the use and enjoyment of the people of the state. In fact, California adopted the Porter Cologne Water Quality Control Act ("Porter-Cologne") in 1969, three years prior to the adoption of the federal Clean Water Act (the "CWA" or "Act") and eighteen years before federal law expressly regulated MS4s. When Congress enacted the CWA, it modeled the Act in part on Porter-Cologne, but scaled back many requirements to meet the needs of a national program. As a result, the comprehensive Statewide program enacted through Porter-Cologne exceeds the more limited regulatory scope of the CWA, including the CWA's NPDES program.

One primary difference between Porter-Cologne and the CWA is the role Congress intended the CWA to play in the state regulatory scheme. When adopting the CWA, Congress preserved the states' ability to impose more stringent water quality controls, allowing the Act to be a federal baseline for water quality.[4] California quickly elected to graft the CWA's NPDES program into its existing regulatory structure, becoming the first state in the nation authorized to issue NPDES permits. The California Legislature ("Legislature") determined that assuming the responsibility was "in the interest of the people of the State, ***in order to avoid direct regulation by the federal government of persons already subject to state law*** pursuant to this division . . . ."[5] In other words, because the State had an existing, more aggressive regulatory program, it was not in the State's interest to allow direct federal regulation through a more narrowly tailored program.

III. FEDERAL LAW

The principal federal law regulating water quality is the CWA, found at 33 U.S.C. § 1251 *et seq*. The CWA, was enacted in 1972, and amended in 1987 to implement a permitting system for all discharges of pollutants from point sources to waters of the United States. In 1987, the CWA was amended to make clear that such discharges include discharges from MS4s. Following the 1987 amendments, NPDES permits are required for discharges from MS4s serving a population of more than 100,000 or from systems that the United States Environmental Protection Agency ("EPA") or the state determine contribute to a violation of a water quality standard or represent a significant contribution of pollutants to waters of the United States.[6] Pursuant to the CWA, the MS4 permits:

---

[4] Section 510 of the CWA, which is codified at Title 33 U.S.C. § 1370, acknowledges the states' authority to adopt or enforce standards or limitations regarding the discharge of pollutants provided such standards are not less stringent than the "effluent limitation, or other limitation, effluent standard, prohibition pretreatment standard or standard of performance" under the CWA.

[5] Cal Water Code § 13370(c) [emphasis added].

[6] 33 U.S.C. § 1342(p)(2) requires NPDES permits for the following discharges:

(i) may be issued on a system or jurisdiction-wide basis;

(ii) shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers; and

(iii) shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.[7]

In 1990, the EPA issued regulations to implement Phase 1 of the NPDES program, defining which entities need to apply for permits and the information to include in the permit application. The permit application must propose management programs that the permitting authority will consider in adopting the permit including the following:

> [A] comprehensive planning process which involves public participation and where necessary intergovernmental coordination, to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate.[8]

Under the CWA, each state is free to enforce its own water quality laws so long as its effluent limitations[9] are not less stringent than those set out in the CWA.[10] The California Supreme Court described the NPDES program as follows:

> Part of the federal Clean Water Act is the National Pollutant Discharge Elimination System (NPDES), "[t]he primary means" for enforcing effluent limitations and standards under the Clean Water Act. (*Arkansas v. Oklahoma*, *supra,* 503 U.S. at p. 101, 112 S.Ct.

(C) A discharge from a municipal separate storm sewer system serving a population of 250,000 or more.

(D) A discharge from a municipal separate storm sewer system serving a population of 100,000 or more but less than 250,000.

(E) A discharge for which the Administrator or the State, as the case may be, determines that the stormwater discharge contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States.

7 33 USC § 1342(p)(3)(B).

8 40 Code of Federal Regulations (CFR) § 122.26(d)(2)(iv).

9 *Effluent limitation* means any restriction imposed by the Director on quantities, discharge rates, and concentrations of "pollutants" which are "discharged" from "point sources" into "waters of the United States," the waters of the "contiguous zone," or the ocean. (40 C.F.R. § 122.2.)

10 33 U.S.C. § 1370.

> 1046.) The NPDES sets out the conditions under which the federal EPA or a state with an approved water quality control program can issue permits for the discharge of pollutants in wastewater. (33 U.S.C. § 1342(a) & (b).)[11]

IV. CALIFORNIA LAW

The CWA requires the EPA to issue NPDES permits to MS4 dischargers, but allows the EPA to delegate that authority to the states.[12] In California, the Legislature has assigned that responsibility to the State Water Resources Control Board ("State Board"), and the individual Regional Water Quality Control Boards ("Regional Boards"). Permits issued by the State Board or the Regional Boards are subject to the same federal regulations, however, because the state of California has broader authority to regulate discharges than the EPA would under the CWA, requirements in NPDES permits issued by the State and Regional Boards frequently exceed the requirements of federal law.

In *City of Burbank v. State Water Resources Control Board* (2005) 35 Ca1.4th 613, the California Supreme Court expressly recognized that NPDES permits issued by the State and Regional Boards can exceed the requirements of federal law, describing the statutory scheme as follows:

> In California, the controlling law is the Porter-Cologne Water Quality Control Act (Porter-Cologne Act), which was enacted in 1969. (Wat. Code, § 13000 *et seq.*, added by Stats.1969, ch. 482, § 18, p. 1051.) Its goal is "to attain the highest water quality which is reasonable, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible." (§ 13000.) The task of accomplishing this belongs to the State Water Resources Control Board (State Board) and the nine Regional Water Quality Control Boards; together the State Board and the regional boards comprise "the principal state agencies with primary responsibility for the coordination and control of water quality. (§ 13001.)
>
> Whereas the State Board establishes statewide policy for water quality control (§ 13140), the regional boards "formulate and adopt water quality control plans for all areas within [a] region" (§ 13240). The regional boards' water quality plans, called "basin plans," must address the beneficial uses to be protected as well as

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[11] *City of Burbank v. State Water Resources Control Bd.*, (2005) 35 Cal.4th 613, 621; Cal Water Code, § 13263.

[12] Section 510 of the CWA, which is codified at Title 33 U.S.C. § 1370, acknowledges the states' authority to adopt or enforce standards or limitations regarding the discharge of pollutants provided such standards are not less stringent than the "effluent limitation, or other limitation, effluent standard, prohibition pretreatment standard or standard of performance" under the CWA.

> water quality objectives, and they must establish a program of implementation. (§ 13050, subd. (j).)[13]

With regard to the baseline role that the CWA plays in California water quality law, the Court held:

> The federal Clean Water Act reserves to the states significant aspects of water quality policy (33 U.S.C. § 1251(b)), and it specifically grants the states authority to "enforce any effluent limitation" that is not "*less stringent*" than the federal standard (33 U.S.C. § 1370, italics added). It does not prescribe or restrict the factors that a state may consider when exercising this reserved authority. . .[14]

Porter-Cologne therefore provides California with broader authority to regulate water quality than it would have if it were operating exclusively under the CWA. The State's authority under Porter-Cologne extends to non-point sources of pollution such as urban and agricultural runoff, discharges to ground water and discharges to land overlying ground water.[15] It not only establishes broader regulatory authority than the CWA, but also extends that broader regulatory authority to a larger class of waters. It is under this authority that the State and Regional Boards act when issuing NPDES permits that exceed the minimum requirements set forth in federal law, namely Title 40, section 122.26 of the Code of Federal Regulations.

The courts, the State Board and the Regional Boards have repeatedly acknowledged that many aspects of NPDES permits issued in California exceed the minimum requirements of the CWA. In a decision on the merits of the 2001 NPDES permit for San Diego County, the State Board acknowledged that the since NPDES permits are adopted as waste discharge requirements in California, they can more broadly protect "waters of the State," rather than being limited to "waters of the United States."[16] As the State Board has expressed it, "the inclusion of 'waters of the State' allows the protection of groundwater, which is generally not considered to be 'waters of the United States.'"[17]

The Regional Boards have also acknowledged in official documents that many of the requirements of MS4 permits exceed the requirements of federal law and are based, therefore, on the broader authority of Porter-Cologne. For example, in a December 13, 2000 staff report regarding the San Diego Regional Water Quality Control Board's draft 2001 permit, it was found

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[13] *City of Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4th 613, 619.

[14] *City of Burbank v. State Water Resources Control Bd.*, (2005) 35 Ca1.4th 613, 627-628.

[15] *See* Cal. Water Code § 13050 [defining the term "Waters of the State" more broadly than the CWA definition of "Waters of the United States"]; *see also* Cal. Water Code § 13260 [requiring a state issued permit for "[a]ny person discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the state, other than into a community sewer system"].

[16] *In Re Building Industry Association of San Diego County and Western States Petroleum Association*, State Board Order WQ 2001-15, Exhibit 9 to the Miscellaneous Authorities included with Section 7 – Documentation.

[17] *Id.*

that 40% of the draft permit requirements "exceed the federal regulations" because they are either more numerous, more specific/detailed, or more stringent than the requirements in the regulations.[18]

Lastly, in *Burbank*, the California Supreme Court acknowledged that aspects of NPDES permits can exceed federal requirements, and held that to the extent such provisions are not required by federal law, the State and Regional Boards are required to consider state law restrictions on agency action.[19] Implicit in the Court's decision is the requirement that orders issued by the State and Regional Boards are subject to State Constitutional restrictions, including those on funding set forth in Article XIII B section 6 of the California Constitution.

V. STATE MANDATE LAW

Article XIII B section 6 of the California Constitution requires that the Legislature provide a subvention of funds to local agencies any time the Legislature or a state agency requires the local agency to implement a new program, or provide a higher level of service under an existing program. Article XIII B section 6 states in relevant part:

> Whenever the Legislature or any state agency mandates a new program or higher level of service on any local government, the state shall provide a subvention of funds to reimburse such local governments for the cost of such program or increased level of service . . . .

The purpose of Section 6 "is to preclude the State from shifting financial responsibility for carrying out governmental functions to local agencies, which are 'ill equipped' to assume increased financial responsibilities because of the taxing and spending limitations that articles XIII A and XIII B impose."[20] The section "was designed to protect the tax revenues of local governments from state mandates that would require expenditure of such revenues."[21] In order to implement Section 6, the Legislature enacted a comprehensive administrative scheme to define and pay mandate claims.[22] Under this scheme, the Legislature established the parameters regarding what constitutes a state mandated cost, defining "Costs mandated by the State" to include:

> any increased costs which a local agency . . . is required to incur after July 1, 1980, as a result of any statute enacted on or after January 1, 1975, or any executive order implementing any statute

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[18] *See* San Diego Regional Board Staff Report, p. 3, ¶ 14, included as Exhibit 18 under Section 7 – Documentation – to these Test Claims.

[19] *City of Burbank v. State Water Resources Control Bd,* (2005) 35 Ca1.4th 613, 618.

[20] *County of San Diego* (1991) 15 Ca1.4th 68, 81; *County of Fresno* (1991) 53 Ca1.3d 482, 487.

[21] *County of Fresno* (1991)53 Cal.3d 482, 487; *Redevelopment Agency v. Commission on State Mandates* (1997) 55 Cal.App.4th 976, 984-85.

[22] Cal. Gov. Code §§ 17500, *et seq.*; *Kinlaw v. State of California* (1991) 54 Ca1.3d 326, 331, 333 [statute establishes "procedure by which to implement and enforce section 6"].

> enacted on or after January 1, 1975, which mandates a new program or higher level of service of an existing program within the meaning of Section 6 of Article XIII B of the California Constitution.[23]

Government Code section 17556 identifies seven exceptions to the rule requiring reimbursement for State mandated costs. The exceptions are as follows:

> (a) The claim is submitted by a local agency . . . that requested legislative authority for that local agency . . . to implement the program specified in the statute, and that statute imposes costs upon that local agency or school district requesting the legislative authority. . . .
>
> (b) The statute or executive order affirmed for the state a mandate that had been declared existing law or regulation by action of the courts.
>
> (c) The statute or executive order imposes a requirement that is mandated by a federal law or regulation and results in costs mandated by the federal government, unless the statute or executive order mandates costs that exceed the mandate in that federal law or regulation. . . .
>
> (d) The local agency . . . has the authority to levy service charges, fees, or assessments sufficient to pay for the mandated program or increased level of service.
>
> (e) The statute, executive order, or an appropriation in a Budget Act or other bill provides for offsetting savings to local agencies . . . that result in no net costs to the local agencies or . . . , or includes additional revenue that was specifically intended to fund the costs of the state mandate in an amount sufficient to fund the cost of the state mandate.
>
> (f) The statute or executive order imposes duties that are necessary to implement, reasonably within the scope of, or expressly included in, a ballot measure approved by the voters in a statewide or local election.
>
> (g) The statute created a new crime or infraction, eliminated a crime or infraction, or changed the penalty for a crime or infraction, but only for that portion of the statute relating directly to the enforcement of the crime or infraction.

[23] Cal. Gov. Code § 17514.

When a new program or level of service is in part federally required, courts have held that the authority to impose a condition does not equate to a direct order or mandate to impose the condition. This principle was expressly recognized in *Hayes v. Commission on State Mandates* (1992) 11 Cal.App.4th 1564. In that case, the appellate court held "[i]f the state freely chooses to impose the costs upon the local agency as a means of implementing a federal program then the costs are the result of a reimbursable state mandate regardless whether the costs were imposed upon the state by the federal government."[24] As a result, when a state agency exercises discretion in choosing which requirements to impose in an executive order, those aspects that were not strictly required by the federal scheme are state mandates.[25]

Similarly, when a state law or order mandates changes to an existing program that requires an increase in the actual level or quality of governmental services provided, that increase will represent a "higher level of service" within the meaning of Article XIII B § 6 of the California Constitution.[26] For example, in *Long Beach Unified School District v. State of California* (1990) 225 Cal.App.3d 155, an executive order required school districts to take specific steps to measure and address racial segregation in local public schools. The appellate court held that this constituted a "higher level of service" to the extent the order's requirements exceeded federal law by mandating school districts to undertake defined remedial actions that were merely advisory under prior governing law. [27]

The 2009 Permit imposes new requirements on the Permittees that exceed the requirements of federal law, and that are unique to the Permittees.[28] For that reason, the 2009 Permit represents a state mandate for which the Permittees are entitled to reimbursement pursuant to Article XIII B section 6 of the California Constitution.

VI. STATE MANDATED ACTIVITIES

On May 22, 2009, the Santa Ana RWQCB issued the 2009 Permit to the Permittees. The 2009 Permit mandates many new programs and activities not required by either federal law or the 2002 Permit. The program and activities that are at issue in this Test Claim are as follows:

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[24] *Hayes v. Commission on State Mandates* (1992) 11 Cal.App.4th 1564, 1593.

[25] *Id*.

[26] *San Diego Unified School District v. Commission on State Mandates* (2004) 33 Cal.4th 859, 877.

[27] *Long Beach Unified School District v. State of California* (1990) 225 Cal.App.3d 155, 173.

[28] Orders issued by any Regional Water Board pursuant to pursuant to Division 7 of the California Water Code (commencing at section 13000) come within the definition of "executive order". *County of Los Angeles v. Commission on State Mandates* (2007) 150 Cal.App.4th 898, 920.

A. 2009 PERMIT SECTION XVIII (WATERSHED ACTION PLANS AND TMDL IMPLEMENTATION) IMPOSE A SERIES OF NEW UNFUNDED STATE MANDATES ON THE PERMITTEES.

1. CHALLENGED PROGRAM REQUIREMENT

Section XVIII of the 2009 Permit imposes a number of new State mandated programs upon the Permittees, that are not mandated by federal law, and without the Santa Ana RWQCB providing funding for any of such programs. Each of the new programs set forth in 2009 Permit Section XVIII concerns what are referred to as "Total Maximum Daily Loads" or "TMDLs" i.e., each involves either: (1) programs designed to implement a EPA and/or a State developed TMDL, in a manner that is not required by federal law; (2) pre-TMDL programs that are not required by federal law; or (3) programs designed to implement partially developed State TMDLs that have not yet been finally approved. The one common thread in each of these new Permit programs is that they all impose new requirements that are not mandated by federal law; nor do the Permittees have fee authority to recover their costs in complying with any of these TMDL-related State mandates. Accordingly, each of the TMDL programs discussed below is an unfunded State mandate which is constitutionally required to be reimbursed by the State.

2. TMDL REQUIREMENTS OF FEDERAL LAW

The CWA was enacted in 1972 by the United States Congress as "a 'comprehensive water quality statute designed to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.'"[29] "To achieve these ambitious goals, the Clean Water Act establishes distinct roles for the Federal and state Governments. Under the Act, [EPA] is required . . . to establish and enforce technology-based limitations on individual discharges into the country's navigable waters," and each state is "to institute comprehensive water quality standards establishing water quality goals for all intrastate waters." "These state water quality standards provide 'a supplementary basis . . . so that numerous point sources, despite individual compliance with effluent limitations, may be further regulated to prevent water quality from falling below acceptable levels.'"[30]

The Act provides that these state-developed Water Quality Standards ("Standards") are to include (1) the designated beneficial use of the water body, and (2) the "water quality criteria" to protect such designated use.[31] The water quality criteria component of the Standards "can be expressed in narrative form or in a numeric form, e.g., specific pollutant concentrations."[32] "Narrative criteria are broad statements of desirable water quality goals in a water quality plan,"

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29 *Burbank, supra*, 135 Cal.4th 613, 619, 620.

30 *PUD No. 1 of Jefferson County v. Washington Department of Ecology* (1994) 511 U.S. 700, 704.

31 33 U.S.C. § 1313(c)(2)(A); 40 CFR § 131.3(i).

32 *Arcadia v. State Board* (2006) 135 Cal.App.4th 1392, 1403.

such as "no toxic pollutants in toxic amounts."[33] A TMDL is to be established "at a level necessary to implement the applicable water quality standards."[34]

The federal regulations define a TMDL as follows:

> *Total Maximum Daily Load (TMDL).* The sum of the individual WLAs [waste load allocations] for point sources and LAs [load allocations] for nonpoint sources and natural background. If a receiving water has only one point source discharger, the TMDL is the sum of that point source WLA plus the LAs for any nonpoint sources of pollution and natural background sources, tributaries, or adjacent segments. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure. If best management practices ("BMPs") or other nonpoint source pollution controls make more stringent load allocations practicable, then wasteload allocations can be made less stringent. Thus, the TMDL process provides for nonpoint source control tradeoffs.[35]

The federal regulations then proceed to define a "wasteload allocation" or "WLA" as: "A portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution. WLAs constitute a type of water quality-based effluent limitation."[36] NPDES permit terms must be consistent with their assumptions and requirements of the waste load allocations within a TMDL.[37]

In short, once adopted, "TMDLs serve as a link in an implementation chain" linking the implementation of the Standards to the NPDES Permits.[38] However, a TMDL is not self-executing and is only enforceable through NPDES permits.[39] In incorporating a TMDL under the federal regulations, NPDES Permits need only be "consistent with the assumptions and requirements of any available waste load allocations for the discharge prepared by the State and approved by EPA pursuant to 40 CFR 130.7."[40]

With these test claims, the Permittees contend that the 2009 Permit terms at issue go beyond what is required by federal law and thus impose a serious of unfunded State mandates in

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[33] *Id.*

[34] 33 U.S.C. §1313(d)(1)(c); *also see Arcadia v. State Board, supra*, 235 Cal.App.4th 1392, 1404 ["A TMDL must be 'established' at a level necessary to implement the applicable water quality standards. . . . Once a TMDL is developed, effluent limitations in NPDES permits must be consistent with the waste load allocations in the TMDL."].

[35] 40 CFR § 130.2(i).

[36] 40 CFR § 130.3(h).

[37] 40 CFR § 122.44(d)(1)(vii)(B).

[38] *Arcadia v. EPA*, (N.D. Cal. 2003) 265 F.Supp.2d 1142, 1144-45.

[39] *Id.*

[40] 40 CFR 122.44(d)(1)(vii)(B).

relation to TMDLs, as follows: (1) various Permit terms require compliance with numeric effluent limits derived from finally adopted TMDLs, even though federal law only requires that municipal NPDES Permits reduce the discharge of pollutants to the "maximum extent practicable" ("MEP") Standard, and do not require compliance with numeric effluent limits; (2) certain Permit terms require compliance with numeric effluent limits derived from the WLAs contained in TMDLs, even though the TMDLs have not been finally adopted or approved by EPA. Federal law does not require an NPDES Permit to require compliance, in any fashion, with a TMDL that has not been "approved by EPA pursuant to 40 CFR 130.7.;"[41] (3) some Permit terms require the Permittees to themselves develop the TMDLs or to otherwise conduct studies or take other action towards the development of TMDLs. Yet, federal law does not mandate that the Permittees take any action towards the development or study of a TMDL. The development of the TMDL is the responsibility of the Regional Water Quality Control Boards, a division of the State.

3. FEDERAL LAW DOES NOT MANDATE THE IMPOSITION OF NUMERIC EFFLUENT LIMITS FROM TMDLS OR OTHERWISE TO BE INCLUDED IN MUNICIPAL NPDES PERMITS.

The plain language of the CWA confirms that numeric effluent limits, either from TMDLs or otherwise, are not required to be imposed on municipal NPDES Permittees. Instead, federal law only requires controls to be included in municipal NPDES Permits, as needed "to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator ***or the State determines appropriate*** for the control of such pollutants," where it provides as follows:

> (B) Municipal Discharge.
>
> Permits for discharges from municipal storm sewers –
>
> (i) may be issued on a system- or jurisdiction-wide basis;
>
> (ii) shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers; and
>
> (iii) shall require controls to reduce the discharge of pollutants to the **maximum extent practicable,** including management practices, control techniques and in system, design and engineering methods, and such other provisions as the Administrator **or *the State determines appropriate*** for the control of such pollutants.[42]

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[41] *Id.*

[42] 33 U.S.C. § 1342(p)(3)(B), emphasis added.

In *Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d 1159 ("Defenders"), the Ninth Circuit Court of Appeal recognized the different approach taken by Congress for Stormwater, finding that "***industrial discharges must comply strictly with state water-quality standards," while Congress chose "not to include a similar provision for municipal storm-sewer discharges.***"[43] The Court found that "because 33 U.S.C. § 1342(p)(3)(B) is not merely silent regarding whether municipal discharges must comply with 33 U.S.C. § 1311," but instead Section 1342(b)(3)(B)(iii) "replaces the requirements of § 1311 with the requirement that municipal storm-sewer dischargers 'reduce the discharge of pollutants to the maximum extent practicable. . .,'" "the statute unambiguously demonstrates that ***Congress did not require municipal storm-sewer discharges to comply strictly with 33 U.S.C. § 1311(b)(1)(C)***."[44]

In *Building Industry Association of San Diego County v. State Water Resources Control Board* (2004) 124 Cal.App.4th 866, 874, the California Court of Appeal similarly found:

> [I]n 1987, Congress amended the Clean Water Act to add provisions that specifically concerned NPDES permit requirements for storm sewer discharges. [Citations.] In these amendments, enacted as part of the *Water Quality Act of 1987*, Congress distinguished between industrial and municipal storm water discharges. . . . With respect to municipal storm water discharges, Congress clarified that the EPA has the authority to fashion NPDES permit requirements to meet water quality standards **without specific numeric effluent limits and instead to impose "controls to reduce the discharge of pollutants to the maximum extent practicable.**"[45]

With respect to TMDLs, the fact that wasteload allocations within a TMDL are not required under the CWA to be enforced as "numeric limits" through a Stormwater Permit, was specifically confirmed by EPA itself in a November 22, 2002 EPA Guidance Memorandum on "*Establishing Total Maximum Daily Load (TMDL) Waste Load Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on those WLAs*" ("EPA Guidance Memo").[46] In this EPA Guidance Memorandum, EPA explained that for NPDES Permits regulating municipal storm water discharges, any water quality based effluent limit for such discharges should be "***in the form of BMPs and that numeric limits will be used only in rare instances***."[47] EPA further concluded that ***"for NPDES-regulated municipal . . . dischargers***

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[43] *Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d 1159, 1165, emphasis added.

[44] *Defenders*, at 1165, emphasis added.

[45] *Building Industry Association of San Diego County v. State Water Resources Control Board* (2004) 124 Cal.App.4th 866, 874, emphasis in original, citing 33 U.S.C. § 1342(p)(3)(B)(iii) and *Defenders, supra* at 1163.

[46] All Exhibit references in this Narrative Statement are contained within the Miscellaneous Authority provided within Section 7 – Documentation to the Test Claims. The EPA Guidance Memo is Exhibit 1 thereto.

[47] Exhibit 1, EPA Guidance Memo, p. 6, emphasis added.

effluent limits should be expressed as best management practices (BMPs), rather than as numeric effluent limits."[48]

EPA went on to expressly recognize the difficulties in regulating Stormwater discharges and explained its policy as follows:

> **EPA's policy recognizes that because storm water discharges are due to storm events that are highly variable in frequency and duration and are not easily characterized, only in rare cases will it be feasible or appropriate to establish numeric limits for municipal and small construction storm water discharges. The variability in the system and minimal data generally available make it difficult to determine with precision or certainty actual and projected loadings for individual dischargers or groups of dischargers. Therefore, EPA believes that in these situations, permit limits typically can be expressed as BMPs, and that numeric limits will be used only in rare instances.**[49]

In a recent Oregon Appellate Court decision in *Tualatin Riverkeepers, et al. v. Oregon Department of Environmental Quality* ("*Tualatin*") (April 28, 2010) 235 Ore.App. 132, the Oregon Court of Appeal addressed, among other issues, the need for waste load allocations contained within developed TMDLs to be enforced as numeric effluent limits within a municipal NPDES Permit under Oregon law. The petitioners in that case argued that the Oregon Department of Environmental Quality ("DEQ") had erred because it had issued a permit that did not ***"incorporate waste load allocations as enforceable effluent limits."***[50]

The Oregon Court initially found that the CWA does not require that municipal NPDES Permits contain "numeric" effluent limits as a means of enforcing Standards, finding that under the CWA "although a permit must include restrictions on discharges of pollutants into the water, the applicable statute does not specify what form they must take. 'Best management practices,' such as those incorporated in the permits at issue in this case, are a type of effluent limitations."[51]

The Oregon Court also discussed the purpose of a TMDL, noting that a TMDL is required to be established for pollutants and waters of the state identified pursuant to section 1313(d) of the CWA. Further, the Oregon Court addressed the petitioners' prime contention that the TMDLs were required under Oregon law to have been incorporated into the Permit as

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[48] *Id.* at p. 4; *also see* August 22, 2003 letter from EPA Headquarters to the Honorable Bart Doyle, then Councilmember for the City of Sierra Madre, wherein EPA Headquarters made clear that EPA has ***"worked closely with all ten Regions on this memo and expects that it will be followed by the states."*** (Exhibit 2, EPA August 22, 2003 Letter, p. 2.

[49] EPA Guidance Memo, p. 4.

[50] *Tualatin, supra*, 235 Ore. App. 132 at 145-146.

[51] *Tualatin, supra,* at 141.

"enforceable effluent limitations."[52] Notably, there was no suggestion that federal law required a TMDL to be incorporated into a municipal NPDES Permit as a "numeric effluent limitation." Instead, as referenced above, the Oregon Court discussed the fact that under the CWA, best management practices were considered to be a "type of effluent limitation," and that such best management practices were authorized to be used pursuant to the CWA, section 33 U.S.C. § 1342(p) as a means of controlling "storm water discharges."[53]

The Court in *Tualatin* went on to conclude that the DEQ need not require that TMDLs be enforced through the use of numeric effluent limits, finding as follows:

> The applicable TMDLs in this case set forth specific waste load allocations for municipal storm water. The permits at issue, in turn, indicate the bodies of water for which TMDLs and wasteload allocations have been established and reference the specific TMDL for those bodies of water. The permits provide in the "adaptive management" section that, "[w]here TMDL wasteload allocations have been established for pollutant parameters associated with the permittee's [municipal separate storm sewer system] discharges, the permittee must use the estimated pollutant load reductions (benchmarks) established in the [storm water management plan] to guide the adaptive management process." . . . Adequate progress toward achieving assigned wasteload allocations will be demonstrated through the implementation of best management practices that are targeted at TMDL-related pollutants." Pursuant to that section, permittees must evaluate progress toward reducing pollutant loads "through the use of performance measures and pollutant load reduction benchmarks developed and listed in the [storm water management plan]."
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> * * *
>
> Although the permits do not themselves include numeric wasteload allocations like those set forth in the TMDLs, the TMDL wasteload allocations are clearly referenced in the permits, and the permits require implementation of best management practices, set forth in the storm water management plans, to make progress towards meeting those wasteload allocations. **Again, best management practices are a type of effluent limitation that is used in municipal storm water permits.** *See* 40 CFR § 122.44(k)(2)-(13). Furthermore, the permits incorporate benchmarks, through incorporation of the storm water management plan, which are specific pollutant load reduction goals for the

[52] *Tualatin, supra,* at 145-146.

[53] *Tualatin, supra,* at 141, citing 33 U.S.C. § 1342(p) and 40 CFR § 122.44(k)(2)-(3).

> permittees. Those measures are "permit requirements" that properly incorporate the TMDL wasteload allocations.[54]

The Oregon opinion confirms that numeric effluent limits are not required to be included in municipal NPDES Permits as a means of implementing the wasteload allocations in a TMDL, or otherwise. Yet, the 2009 Permit in issue contains a series of specific numeric effluent limits based on wasteload allocations from TMDLs, but without providing appropriate funding to fund these new programs. As such, all of the new TMDL-related programs in the Permit which require compliance with numeric effluent limits are unfunded State mandates that are not required under federal law; such mandates must, therefore, be funded by the State.

In a recently EPA-issued draft technical document entitled "TMDLs Stormwater Handbook, November, 2008" (Exhibit 3, hereafter "EPA Draft Handbook"), EPA provides "information to TMDL practitioners and NPDES stormwater permit writers" on various subjects, including:

> - **Approaches for translating TMDL WLAs and implementation recommendations into NPDES stormwater permit requirements and implementation strategies.[55]**

The EPA Draft Handbook is designed to assist in the development of "TMDL implementation plans that connect WLAs and stormwater permits by either (1) including specific recommendations (e.g., performance standards, management measures) for implementing WLAs, or (2) providing technical information for permit writers and permittees on how to analyze, select, and implement provisions to implement the WLAs."[56] The Draft Handbook specifically references and quotes from the EPA Guidance Memo (referenced above), and provides that: ***"EPA expects that most WQBELs for NPDES-regulated municipal and small construction storm water discharges will be in the form of BMPs, and that numeric limits will be used only in rare instances."***[57]

Furthermore, in a report entitled "*Assessing the TMDL Approach to Water Quality Management,"* (September, 2001), issued for Congress by the National Research Council ("NRC"), a member of the National Academies of Science, the NRC similarly concluded that adaptive BMPs should be utilized to enforce TMDLs:

> Many debates in the TMDL community have centered on the use of "phased" and "iterative" TMDLs. Because these terms have particular meanings, this report uses a more general term – adaptive implementation. Adaptive implementation is, in fact, the application of the scientific method to decision-making. It is a

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54 *Tualatin, supra,* at 148.

55 EPA Draft Handbook, p. 1.

56 EPA Draft Handbook, p. 1.

57 EPA Draft Handbook, p. 133; emph. added.

> process of taking actions of limited scope commensurate with available data and information to continuously improve our understanding of a problem and its solutions, while at the same time making progress toward attaining a water quality standard.[58]

In addition to all of the above authority, there is a plethora of State Board Orders and related formal documentation confirming that the long-held policy of the State of California is not to require the use of numeric limits for stormwater dischargers, but rather to apply the MEP standard through an iterative BMP process. *See, e.g.*, Exhibit 5, State Board Order No. 91-04, p. 14 ["There are ***no numeric objectives or numeric effluent limits*** required at this time, either in the Basin Plan or any statewide plan that apply to storm water discharges." p. 14]; Exhibit 6 State Board Order No. 96-13, p. 6 ["***federal laws does not require*** the [San Francisco Reg. Bd] to dictate the specific controls."]; Exhibit 7, State Board Order No. 98-01, p. 12 ["Stormwater permits must achieve compliance with water quality standards, but they may do so by requiring implementation of BMPs ***in lieu of numeric water quality-based effluent limitations."***]; Exhibit 8 State Board Order No. 2000-11, p. 3 [***"In prior Orders this Board has explained the need for the municipal storm water programs and the emphasis on BMPs in lieu of numeric effluent limitations."***]; Exhibit 9, State Board Order No. 2001-15, p. 8 ["While we continue to address water quality standards in municipal storm water permits, we also continue to believe that the iterative approach, which focuses on timely improvements of BMPs, is appropriate."]; Exhibit 10, State Board Order No. 2006-12, p. 17 [***"Federal regulations do not require numeric effluent limitations for discharges of storm water"***]; Exhibit 11, Stormwater Quality Panel Recommendations to the California State Water Resources Control Board – The Feasibility of Numeric Effluent Limits Applicable to Discharges of Stormwater Associated with Municipal, Industrial and Construction Activities, June 19, 2006, p. 8 [***"It is not feasible at this time to set enforceable numeric effluent criteria for municipal BMPs and in particular urban dischargers."***]; and an Exhibit 12, April 18, 2008 letter from the State Board's Chief Counsel to the Commission on State Mandates, p. 6 [***"Most NPDES Permits are largely comprised of numeric limitations for pollutants. . . . Stormwater permits, on the other hand, usually require dischargers to implement BMPs."***].

In short, neither State nor federal law or policy provide for the incorporation of wasteload allocations as numeric limits into an MS4 Permit. To the contrary, both EPA and the State have long recognized that numeric limits should only be incorporated into an MS4 Permit in "rare instances," with the State Board's own Numeric Effluent Limits Panel concluding that "it is not feasible at this time to set enforceable numeric effluent criteria for municipal BMPs and in particular urban dischargers."

4. REQUIREMENTS FROM 2002 PERMIT

With the exception of the TMDL programs in the 2002 Permit involving the sediment and nutrient TMDLs for San Diego Creek and Newport Bay (not in issue in these Test Claims), and the need for further studies regarding fecal coliform in Newport Bay (also not in issue in these Test Claims), the 2002 Permit contains no TMDL-related programs and imposes no requirements on the Permittees to develop or implement any TMDL program in issue in these

[58] Exhibit 4, *Assessing the TMDL Approach to Water Quality Management*, p. 90.

Test Claims; nor does the 2002 Permit contain any requirement to meet numeric effluent limitations derived from a wasteload allocation from a TMDL or otherwise (other than the requirements involving the sediment and nutrient TMDLs that are not in issue here).

5. 2009 PERMIT MANDATED TMDL-RELATED ACTIVITIES

a. The Permit Programs Under Section XVIII.B Involving Promulgated TMDLS for Toxic Pollutants, Are All Unfunded State Mandates.

Under 2009 Permit Section XVIII.B, the Santa Ana RWQCB seeks to impose a series of new programs not contained in any prior permit, based on: *"EPA Promulgated Technical TMDLs for Toxic Pollutants in San Diego Creek and Newport Bay, including metals, organo-chlorine compounds, selenium, and organo-phosphate pesticides. EPA and the Los Angeles Regional Water Quality Control Board established technical TMDLs for metals in Coyote Creek."*[59]

For each of these referenced TMDLs, the 2009 Permit incorporates and requires compliance with specific numeric waste load allocations or load allocations taken from these various TMDLs. Yet, requiring compliance with each of these numeric effluent limits set forth in the tables under Section XVIII.B of the Permit (pages 68-74), constitutes new unfunded State mandates that are not required by federal law.

Each of the new TMDL-related programs is designed to implement either the EPA promulgated TMDLs for toxic pollutants, discussed above, or Regional Board promulgated TMDLs for other toxic pollutants which have not yet been "approved by EPA pursuant to 40 CFR 130.7." Further, all of the adopted or to be adopted TMDLs referenced in Subsections XVIII.B.1 through B.4 have been based on what is known as the "California Toxics Rule" or "CTR," a rule adopted by EPA in May of 2000.[60] Yet, a review of CTR itself, as well as EPA's Responses to Comments made in connection with CTR (Excerpts of which are included as Exhibit 15), even further confirms that TMDLs, once approved by EPA, impose no specific federal mandates on the State, but only trigger "a number of discretionary choices" for the State to make.

To start with, in the Preamble to CTR, ***EPA made clear it was not intending to require municipal dischargers to strictly comply with the numeric objectives set forth in CTR.*** To the contrary, EPA stated that CTR contains "no federal mandates" for State, local, or tribal government or the private sector.[61] Rather than imposing a federal mandate and requiring the State of California to apply the CTR limits as strict Stormwater Standards, EPA indicated the exact opposite was to occur:

> EPA has determined that this rule contains no regulatory requirements that might significantly or uniquely affect small

[59] Permit, p. 68, Section XVIII.B.1.

[60] *See* Exhibit 13, California Toxics Rule ("CTR"), 65 Fed. Reg. 31682.

[61] Exhibit 13, 65 Fed. Reg. 31682, 31708.

governments. This rule establishes ambient water quality criteria which, by themselves do not directly impact any entity. The State will implement these criteria by ensuring that NPDES permits result in discharges that will meet these criteria. **In so doing, the State will have considerable discretion.**

* * *

Under the CWA water quality standards program, States must adopt water quality standards for their waters that must be submitted to EPA for approval.

* * *

Thus, under the CWA, EPA's promulgation of water quality criteria or standards establishes standards that the State, in turn, implements through the NPDES permit process. **The State has <u>considerable discretion</u> in deciding how to meet the water quality standards and in developing discharge limits as needed to meet the standards.** In circumstances where there is more than one discharger to a water body that is subject to water quality standards or criteria, a State also has discretion in deciding on the appropriate limits for the different dischargers. While the State's implementation of federally-promulgated water quality criteria or standards may result indirectly in new or revised discharge limits for small entities, the criteria or standards themselves do not apply to any discharger, including small entities.

Today's rule, as explained above, does not itself establish any requirements that are applicable to small entities. As a result of EPA's actions here, the State of California will need to ensure that permits it issues include limits as necessary to meet the water quality standards established by the criteria in today's rule. **In so doing, the State will have a number of discretionary choices associated with permit writing.** While California's implementation of today's rule may ultimately result in some new or revised permit conditions for some dischargers, including small entities, EPA's action today does not impose any of these as yet unknown requirements on small entities.[62]

Moreover, according to EPA, CTR was <u>not</u> to have a direct affect on Stormwater dischargers. Instead, EPA stated that with respect to Stormwater permits, "compliance with water quality standards through the use of Best Management Practice (BMPs) is appropriate."[63] EPA also claimed it would "continue to work with the State to implement storm water permits

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[62] <u>Exhibit 13</u>, 65 Fed. Reg. 31682, 31708-709; emphasis added.

[63] <u>Exhibit 13</u>, 65 Fed Reg. 31703.

that comply with water quality standards with an emphasis on pollution prevention and best management practices ***rather than costly end-of-pipe controls***."[64]

EPA further represented that the CTR language "allows the practice of applying maximum extent practicable (MEP) to MS4 permits, along with best management practices (BMPs) as effluent limits to meet water quality standards where infeasible or insufficient information exists to develop WQBELS."[65] Additional examples of EPA representations in this regard are as follows:

County of Ventura's comments at the CTR public hearing:

> "We have also recently completed a four-year monitoring program and, using the information from the monitoring program, we have attainability of the data that we have collected for our program. This attainability data indicates that even if we comply – apply the BMP program to the maximum extent possible, the expenditure of radial funds, we would still not be able to meet the requirements of the proposed criteria for several of the metals and other constituents which would then – of course, our program would go into a treatment mode for stormwater discharges. We believe that this was going to be very costly for us, particularly very costly for smaller communities who don't have the base to spread the cost of such expense over their population."[66]

EPA's Response –

> *If you look across the country, across the U.S., there are many, many states that have standards on the books, water quality standards that are far more stringent than the numbers we're promulgating or proposing to promulgate in Southern California. If you look at their standards, you won't see any black boxes on the end of those storm water discharges.* ***Nobody builds treatment for storm water treatment in this country. They've been implementing standards for 15 years, California is no different."***[67]

A portion of EPA's response to comments of Los Angeles County:

> *EPA did not ascribe benefits or costs of controlling storm water discharges in the proposed or final Economic Analysis. EPA believes that many storm water dischargers can avoid violation of*

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64 Exhibit 14, EPA Response to Comment 001-007.

65 Exhibit 14, EPA Response to Comment 040-004.

66 Exhibit 14, EPA Response to CTR H-002-017.

67 Exhibit 14, EPA Response to CTR H-002-017.

> *water quality standards* ***through application of best management practices that are already required by the current storm water permits.***
>
> *The commenter claims that even with the application of current BMPs, its storm water dischargers would still violate water quality standards due to the CTR criteria. The commenter appears to assume that storm water discharge would be subject to numeric water quality based effluent limits which would be equivalent to the criteria values and applied as effluent limits never to be exceeded, or calculated in the same manner that effluent limits are calculated for other point sources, such as POTWs. The comment then appears to assume that such WQBELs would then require the construction of very costly end-of-pipe controls.*
>
> *EPA contends that neither scenario is valid with regards to developing WQBELs for storm water discharges or establishing compliance with WQBELs. . . EPA will continue to advocate the use of BMPs, as discussed in the CTR preamble. . . .* ***EPA will continue to work with the State to implement storm water permits that comply with water quality standards with an emphasis on pollution prevention and best management practices rather than costly end-of-pipe controls.***[68]

A portion of EPA's Response to Comments of Sacramento County –

> *EPA believes the applicability of water quality standards to storm water discharges is outside the scope of the rule.*[69]

An excerpt of EPA's written response to Fresno County Metropolitan Flood Control District –

> ***EPA believes that implementation of the criteria [CTR] as applied to wet-weather dischargers will not require the construction of end-of-pipe facilities.***[70]

Other EPA comments on the issue:

> ***As further described in the responses to CTR-021-008, CTR-013-003 and CTR-040-004, EPA believes that the final CTR will not significantly affect the current storm water program being implemented by the State, which includes the requirement to develop best management practices to control pollutants in storm***

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[68] Exhibit 14, EPA Response to CTR-001-007.

[69] Exhibit 14, EPA Response to CTR-040-014b.

[70] Exhibit 14, EPA Response to CTR-031-005b.

> ***water discharges. As such, EPA believes that inclusion of end-of-pipe treatment costs for storm water are inappropriate.***[71]

EPA written comments to the California Storm Water Task Force:

> ***EPA disagrees with the cost estimates provided by the commenter as EPA does not believe that storage and treatment of stormwater would be required to ensure compliance with the CTR.***[72]
>
> ***EPA believes that the CTR language allows for the practice of applying maximum extent practicable (MEP) to MS4 permits, along with best management practices (BMPs) as effluent limits to meet water quality standards where infeasible or insufficient information exists to develop WQBELs.***[73]

EPA similarly confirmed that CTR was not creating a "federal requirement" when it issued its "Economic Analysis of the California Toxic Rule," October 1999, which was prepared for EPA by Science Applications International Corporation (hereafter, "EPA's Economic Analysis of CTR," Exhibit 15). In EPA's Economic Analysis of CTR, it concluded that ***"[t]he State of California has significant flexibility and discretion*** as to how it chooses to implement the CTR within the NPDES permit program."[74]

The fact that CTR-derived TMDLs should not be strictly applied to stormwater through numeric limits has further been confirmed by the State of California in its "*Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP)," adopted by the State Board by Resolution 2000-015 on April 26, 2000.[75] California's SIP confirms on page 1 that the SIP was designed to establish "implementation provisions for priority pollutant criteria promulgated by . . . EPA through the . . . California Toxics Rule (CTR)," but that it ***"does not apply to regulation of stormwater discharges."***[76]

As such, each of the TMDL Programs as described below that seek to require compliance with wasteload allocations through the use of "numeric effluent limitations," are unfunded State mandates subject to reimbursement.

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71 Exhibit 14, EPA Response to CTR-035-044c.

72 Exhibit 14, EPA Response to CTR H-001-001b.

73 Exhibit 14, EPA Responses to CTR-040-004.

74 EPA Economic Analysis of CTR, p. ES-2; *also see* CTR, 65 Fed. Reg. 31703 [where EPA confirmed CTR was not to have a direct effect on NPDES sources not typically subject to numeric water quality based effluent limits or urban runoff, instead finding, ***"compliance with water quality standards through the use of best management practices (BMPs) is appropriate."]***.

75 Exhibit 16, "*State Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*," also known as the "State Implementation Plan" or "SIP."

76 SIP, p. 1, n. 1, emph. added.

(1) 2009 Permit Subsections XVIII.B.1 through B.4 Require Compliance with a Series of Unfunded Mandates relating to Numeric Effluent Limitations for Various EPA Promulgated Toxic Pollutant TMDLs.

For the TMDLs described in the 2009 Permit as "Toxic Pollutants in San Diego Creek and Newport Bay, California, EPA-Region 9, established June 14, 2002," the 2009 Permit sets forth a number of numeric effluent limits in Tables 1 A/B/C, Table 2 A/B/C/D, and 3.[77] Specifically, for the numeric effluent limits set forth in Tables 1, 2, and 3,[78] the 2009 Permit requires the following:

> *The Permittees in the Newport Watershed shall comply with the waste load allocations specified in the established TMDLs and shown in Tables 1 A/B/C, 2 A/B/C/D, and 3. These wasteload allocations shall remain in effect unless and until alternative wasteload allocations are established in TMDLs approved by the Regional Board, State Board, Office of Administrative Law, and EPA.*[79]

However, as discussed at length above, it is clear from the plain language of the CWA and controlling case law, along with EPA-issued Guidance, CTR, EPA's Responses to Comments on CTR, and State-issued policies and orders, that federal law does not require NPDES Permits for municipal dischargers, such as the subject Permit, to include programs requiring compliance with numeric effluent limits. Instead, both EPA and the State Board have made clear that numeric effluent limits are not required to be complied with under federal law, and that an adaptive best management practices approach should instead be adhered to. (*See* discussion, *supra*.)

Accordingly, the numeric effluent limits set forth in Tables 1 A/B/C, Table 2 A/B/C/D and Table 3 and which are all derived from WLAs contained within various TMDLs, go beyond federal law and represent unfunded State mandated programs subject to reimbursement under the California Constitution.

(2) 2009 Permit Subsection XVIII.B.5 Requires Compliance With Numeric Effluent Limits for Organo-Chlorine Compounds Without Funding.

Under 2009 Permit Subsection XVIII.B.5:

> *Accordingly, upon approval of the Regional Board-adopted organo-chlorine compound TMDLs by the State Board and the Office of Administrative Law, the Permittee shall comply with both the EPA and Regional Board wasteload allocations specified in*

[77] Permit, Section XVIII.B.4, pp. 68-70

[78] Permit, Section XVIII.B.4, pp. 68-71.

[79] Permit, Section XVIII.B.4, p. 68-69.

> *Tables 2 A/B/C/D, and Table 4, respectively. In accordance with the Regional Board TMDLs, compliance with the allocations specified in Table 4 shall be achieved as soon as possible, but no later than December 31, 2015. Upon approval of the Regional Board-approved organo-chlorine compounds TMDLs by EPA, the applicable wasteload allocations shall be those specified in Table 4.*

The above-referenced 2009 Permit requirement thus imposes a series of unfunded State mandates. First, said Subsection would require compliance with the numeric effluent limits based on the WLAs set forth in EPA's organo-chlorine compound TMDL, as set forth in Table 2 A/B/C. Because, as discussed above, federal law does not require the use of numeric effluent limits to enforce WLAs contained within TMDLs, such a Permit requirement is a State mandate which goes beyond what is required under federal law.

Second, 2009 Permit Subsection XVIII.B.5 requires compliance with a State adopted TMDL even though it has not yet been ***"approved by EPA pursuant to 40 CFR § 130.7."***[80] Accordingly, any portion of a TMDL incorporated into the subject Permit where the TMDL has not yet been "approved by EPA," *i.e.*, a Regional Board organo-chlorine TMDL referenced in Subsection XVIII.B.5, constitutes a State program that is clearly not required by federal law, and thus is an unfunded State requirement.

Third, according to the requirement in Subsection XVIII.B.5, once the Regional Board's TMDL for organo-chlorine has been approved by EPA, then in accordance with the terms of the 2009 Permit, the numeric effluent limits contained in "*Table 4 shall be achieved as soon as possible but no later than December 31, 2015.*" Yet as discussed above, federal law does not require that numeric effluent limits from waste load allocations or otherwise, be incorporated into a municipal NPDES permit. This requirement of Subsection XVIII.B.5 is thus yet another TMDL-related mandate not required under federal law.

Accordingly, the requirements under XVIII.B.5 involving the organo-chlorine compound TMDLs constitute a series of requirements that go beyond the Clean Water Act, and as such, are all unfunded State mandates.

(3) The 2009 Permit's New Programs Under Subsections XVIII.B.7 and XVIII.B.8, Requiring Permittees Within the Newport Bay Watershed to "Participate in the Development and Implementation" of TMDLs for Metals and Selenium, are unfunded State Mandates.

Subsection XVIII.B.7 of the 2009 Permit provides that the Regional Board's staff, in collaboration with the stakeholders, is developing TMDLs for metals and selenium that will include implementation plans and monitoring programs and that are intended to replace the EPA TMDLs. This Subsection then requires as follows:

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[80] *See* 40 CFR § 122.44(d)(1)(vii)(B).

> *The Permittees within the Newport Bay Watershed shall continue to participate in the development and implementation of these TMDLs.*[81]

A requirement that the Permittees "participate in the development and implementation" of TMDLs, is not a requirement mandated by federal law. Specifically, nothing under federal law requires that Permittees develop or even participate in the "development" of a TMDL, and thus the requirements set forth in such Subsection XVIII.B.7 constitutes an unfunded State mandate.

In addition, under 2009 Permit Subsection XVIII.B.8, in connection with the Regional Board's proposed selenium TMDL, the Permittees must establish a "Cooperative Watershed Program" to meet the requirements of a Selenium TMDL Implementation Plan, and must thereafter implement this program where it provides as follows:

> *A proposed Cooperative Watershed Program that will fulfill applicable requirements of the Selenium TMDL Implementation Plan must be submitted by the stakeholders covered by this water within twenty-four (24) months of adoption of this order, or one month after approval of the selenium TMDLs by OAL, whichever is later. The program must be implemented upon Regional Board's approval.*[82]

Again, however, there is no requirement anywhere under federal law, either in connection with the TMDL requirements within the Clean Water Act or the regulations, or otherwise, that requires the Permittees to develop such a "Cooperative Watershed Program." Moreover, there is no requirement in federal law that the Permittees "implement" such a program to meet the requirements of a TMDL, particularly as discussed above, given that such a TMDL has not yet been "approved by EPA," and that a TMDL is not "self-executing." Further, the requirement to merely implement, sight unseen, a State adopted TMDL, is not a requirement that exists under federal law. The requirements set forth in Subsection XVIII.B.8 are yet additional TMDL-related unfunded State mandates.

(4) The 2009 Permit's New Programs under Subsection XVIII.B.9, Requiring Permittees to Develop and Implement a Constituent Specific Source Control Plan for Coyote Creek and San Gabriel River TMDL for Metals and Selenium, are Unfunded State Mandates.

Subsection XVIII.B.9 requires as follows:

> *The Permittees with discharges tributary to Coyote Creek or the San Gabriel River shall develop and implement a constituent-specific source control plan for copper, lead and zinc until a*

[81] Permit, Subsection XVIII.B.7, p. 72.

[82] Permit, Subsection XVIII.B.8, p. 73.

> *TMDL implementation plan is developed. The source control plan shall include a monitoring program and shall be completed within 12 months from the date of adoption of this order. The source control plan shall be designed to ensure compliance with the following waste load allocations:*
>
> **[Table 6 – Municipal Stormwater Waste Load Allocations – Coyote Creek]**[83]

Nothing in federal law, however, requires the subject Permittees to develop or implement a "constituent-specific source control plan," nor to implement a "monitoring program" as a part of such a constituent-specific source control plan.[84] In addition, nothing in federal law require the Permittees to develop and implement a "source control plan" to achieve compliance with specific numeric effluent limits contained within a particular TMDL, in this case for Coyote Creek. Because federal law does not require the inclusion within a Municipal NPDES Permit of a "constituent-specific source control plan," or a "monitoring program" in relationship thereto, nor compliance with particular waste load allocations contained in such a constituent-specific source control plan, all such requirements under Subsection XVIII.B.9 are plainly unfunded State mandates.

b. The 2009 Permit Program Under Subsection XVIII.C.1 Relating to Regional Board-Adopted TMDLs for Fecal Coliform/Bacteria For Newport Bay, is an Unfunded State Mandate.

2009 Permit Subsection XVIII.C.1 requires that the Permittees comply with a Regional Board-adopted TMDL for fecal coliform for bacteria in Newport Bay, where it requires as follows:

> *The permittees shall comply with the waste load allocations for urban runoff in Tables 8A and 8B in accordance with the deadlines in Tables 8A and 8B. Compliance determination for fecal coliform shall be based on monitoring conducted at representative sampling locations within San Diego Creek and Newport Bay. (The permittees may use the current sampling locations for compliance determination.)*[85]

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[83] Permit, Subsection XVIII.B.9, p. 73.

[84] Under the Clean Water Act and EPA's Regulations, states are to identify impaired water segments, rank the segments in order of priority, and thereafter establish TMDLs for the segments according to the ranking. The Upper Reach of Coyote Creek has not been listed as an impaired segment, nor has it been proposed for listing as impaired under Section 303(d) of the Act. Accordingly, no TMDL is even appropriate at this time for the Upper Reach of Coyote Creek, and therefore no TMDL requirement in any form in any NPDES Permit, is required under federal law.

[85] Permit, Subsection XVIII.C.1, p. 73.

The above-referenced requirement is an unfunded State mandate for two reasons. First, federal law only requires consistency with the assumptions and requirements of a TMDL ***"approved by EPA."***[86] Because the referenced TMDL has not yet been approved by EPA, federal law imposes no obligations of any kind upon the Permittees to take any action regarding such a TMDL. Therefore the inclusion of any requirement to comply with the fecal coliform TMDL for Newport Bay and San Diego Creek, is an unfunded State mandate.

Second and in addition, as discussed above, federal law does not require strict compliance with any numeric effluent limitations within a municipal NPDES Permit. Thus, beyond the fact the EPA has not approved the fecal coliform bacteria TMDL in question, this New Program in Subsection XVIII.C.1 of the 2009 Permit is an unfunded mandate as it goes beyond the requirement of federal law by attempting to impose particular numeric effluent limits, i.e., the waste load allocations from the fecal coliform TMDL, upon the Permittees.

c. The 2009 Permit Programs in Subsection XVIII.D.1 Relating to TMDLs for Diazinon and Chlorpyrifos are all Unfunded State Mandates.

Subsection XVIII.D.1 of the 2009 Permit requires Permittees to meet specific numeric limits from TMDLs for Diazinon and Chlorphyrifos for San Diego Creek, and Chlorphyrifos for Newport Bay, where it provides as follows:

> *The permittees in the Newport Bay Watershed shall comply with the allocations in Tables 9A and B.*
>
> ***[Table 9A Diazinon and Chlorpyrifos allocations for San Diego Creek].***
>
> ***[Table 9B Chlorpyrifos allocations for Upper Newport Bay].***

These new programs requiring compliance with specific numeric effluent limits are new unfunded State mandates given that, as discussed at length above, federal law does not require that wasteload allocations contained within TMDLs be incorporated into municipal NPDES Permits as numeric effluent limits. Again, instead, the development of Municipal Permit terms need only ensure consistency with the "assumptions and requirements" of wasteload allocations in TMDLs, through the use of adaptive best management practices. The new programs imposed under Subsection XVIII.D.1 of the Permit are, therefore, unfunded State mandates subject to reimbursement under the California Constitution.

6. CONCLUSION - TMDL-RELATED UNFUNDED MANDATED PROGRAMS

The 2009 Permit includes a whole new series of Permit requirements not found anywhere in the 2002 Permit relating to TMDLs.

The 2009 Permit specifically:

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86 *See* 40 CFR § 122.44(d)(1)(vii)(B).

1) compels compliance with numeric limits taken from wasteload allocation within TMDLs;

2) requires compliance with numeric limits derived from TMDLs not "approved by EPA";

3) requires that the Permittees actually develop certain TMDLs (which is the responsibility of the State and/or the EPA); and

4) requires the Permittees to conduct various studies and monitoring, and develop and implement new programs and implementation plans, all in connection with the development of TMDLs.

All such TMDL-related programs are unfunded State Mandates not required under federal law. The costs to the Permittees to fund these numerous TMDL-related mandates will be in the tens of millions of dollars, and may be well in excess of one hundred million dollars.

B. THE 2009 PERMIT PROVISIONS REQUIRING PUBLIC PROJECTS TO COMPLY WITH LOW IMPACT DEVELOPMENT AND HYDROMODIFICATION REQUIREMENTS ARE UNFUNDED STATE MANDATES.

The 2009 Permit requires the Permittees to develop and implement a program to ensure that new development and significant redevelopment projects comply with strict low impact development and hydromodification prevention requirements. The issue of whether such requirements exceed the requirements of federal law, and represent reimbursable state mandates was considered by the Commission in Test Claim 07-TC-09, *Discharge of Stormwater Runoff – Order No. R9-2007-0001* (regarding the San Diego County Municipal Stormwater Permit).[87] The 2009 Permit includes low impact development and hydromodification requirements that are similar, and in many ways more stringent than those at issue in Test Claim 07-TC-09.

In its decision on Test Claim 07-TC-09, the Commission determined that the San Diego County large municipal stormwater permit's low impact development and hydromodification requirements exceed the requirements of federal law, and as such represent state mandates. The Commission determined, however, that because the County of San Diego and the other permittees retained the ability to assess fees for new development, that the requirements did not represent a reimbursable state mandate.[88]

With regard to municipal projects, the Commission found that the low impact development and hydromodification requirements in the San Diego County permit are not reimbursable state mandates because the permittees in that case are under no obligation to construct projects that would trigger the San Diego County permit requirements.[89] In support of

[87] A copy of the Commission's decision in Test Claim 07-TC-09, Discharge of Stormwater Runoff – Order No. R9-2007-0001 is included under Section 7 – Documentation to these Test Claims.

[88] Test Claim 07-TC-09, *Discharge of Stormwater Runoff – Order No. R9-2007-0001*, 1.

[89] Test Claim 07-TC-09, Discharge of Stormwater Runoff – Order No. R9-2007-0001, 46, 52.

this determination, the Commission cited the California Supreme Court's decision in *Department of Finance v. Commission on State Mandates (Kern High School Dist.)* (2003) 30 Cal.4th 727. In *Kern High School Dist.*, the Court held that certain hearing requirements imposed upon school districts did not constitute a reimbursable state mandate because they were a requirement of voluntary program the school districts had elected to participate in. The Court held "activities undertaken at the option or discretion of a local government entity (that is, actions undertaken without any legal compulsion or threat of penalty for nonparticipation) do not trigger a state mandate and hence do not require reimbursement."[90]

In support of its to this decision, the Court relied on a lower court decision in *City of Merced v State of California* (1984) 153 Cal.App.3d 777. In that case, the City of Merced elected to take property by eminent domain. Then recent legislation required the City to compensate the property owner for loss of "business goodwill." The City sought reimbursement from the State, arguing that the new statutory requirement was a reimbursable state mandate. The Court of Appeal concluded that the City's increased costs flowed from its optional decision to condemn the property. The court reasoned: "whether a city or county decides to exercise eminent domain is, essentially, an option of the city or county, rather than a mandate of the state . . . Thus, payment for loss of goodwill is not a state-mandated cost."[91]

The conditions that dictated the Court's decision in *Kern High School Dist.* are not present in the 2009 Permit. For one, the 2009 Permit is not a voluntary program. It nonetheless requires the Permittees to take immediate mandatory actions, including updating the Permittees' model Water Quality Management Plan ("WQMP") to incorporate low impact development and hydromodification principles,[92] and developing feasibility criteria for project evaluation to determine the feasibility of implementing low impact development BMPs. Both requirements must be complete within 12 months of the 2009 Permit's effective date,[93] and both include elements that are specific to municipal projects.[94]

The conditions that dictated the Court's decision in *Kern High School Dist.* are also absent with regard to project implementation. Again, the 2009 Permit is not a voluntary program, yet it requires the Permittees to incur costs related to low impact development and hydromodification on any municipal project.[95] This includes hospitals, laboratories, medical facilities, recreational facilities, airfields, parking lots, streets, roads, highways, and freeways. These projects are not optional. They are integral to the Permittee's function as municipal entities, and the failure to make necessary repairs, upgrades and extensions can expose the Permittees to liability.

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[90] Department of Finance v. Commission on State Mandates (Kern High School Dist.) (2003) 30 Cal.4th 727, 742.

[91] City of Merced v State of California (1984) 153 Cal.App.3d 777, 783.

[92] 2009 Permit section XII.C.1.

[93] 2009 Permit section XII.E.1.

[94] Including the "Green Streets" requirements of Permit section XII.B.2.

[95] 2009 Permit section XII.B.7 requires the Permittees to document which low impact development BMPs are included on any project in the WQMP for the project.

The rationale from *City of Merced* is likewise inapplicable. In that case, the City had the ability to avoid the new program by purchasing property, rather than taking it with eminent domain. Under the 2009 Permit, the Permittees have no such option. The 2009 Permit will force the Permittees to incur new, additional costs on every municipal project. Moreover, since issuing the *Kern High School Dist.* Decision, the California Supreme Court has rejected application of *City of Merced* in circumstances beyond those strictly present in Kern High School Dist.

In *San Diego Unified School Dist. v. Commission on State Mandates* (2004) 33 Cal.4th 859, the Court considered similar regulatory requirements to those at issue in *Kern High School Dist.* The Court discussed its decision in *Kern High School Dist.*, at length, and cautioned future reliance on *City of Merced* holding:

> [W]e agree with the District and amici curiae that there is reason to question an extension of the holding of City of Merced so as to preclude reimbursement under article XIII B, section 6 of the state Constitution and Government Code section 17514 whenever an entity makes an initial discretionary decision that in turn triggers mandated costs. Indeed, it would appear that under a strict application of the language in *City of Merced*, public entities would be denied reimbursement for state-mandated costs in apparent contravention of the intent underlying article XIII B, section 6 of the state Constitution and Government Code section 17514 and contrary to past decisions in which it has been established that reimbursement was in fact proper. For example, as explained above, in *Carmel Valley, supra*, 190 Cal.App.3d 521, an executive order requiring that county firefighters be provided with protective clothing and safety equipment was found to create a reimbursable state mandate for the added costs of such clothing and equipment. (*Id.*, at pp. 537–538.) The court in *Carmel Valley* apparently did not contemplate that reimbursement would be foreclosed in that setting merely because a local agency possessed discretion concerning how many firefighters it would employ—and hence, in that sense, could control or perhaps even avoid the extra costs to which it would be subjected. Yet, under a strict application of the rule gleaned from *City of Merced, supra*, 153 Cal.App.3d 777, such costs would not be reimbursable for the simple reason that the local agency's decision to employ firefighters involves an exercise of discretion concerning, for example, how many firefighters are needed to be employed, etc. We find it doubtful that the voters who enacted article XIII B, section 6, or the Legislature that adopted Government Code section 17514, intended that result, and hence we are reluctant to

> endorse, in this case, an application of the rule of *City of Merced* that might lead to such a result.[96]

Thus strict reliance on the *City of Merced* rationale is only appropriate in the very limited circumstances presented in the *Kern High School Dist.*, case. Those conditions are not present in the 2009 Permit, which imposes requirements on the Permittees that are either wholly unrelated to voluntary action on the part of the Permittees, or are triggered by municipal projects that the Permittees implement with little to no discretion because they are integral to the Permittees' function as municipal entities, and/or the failure to undertake them would expose the Permittees to liability. As set forth above, and in greater detail below, these requirements exceed federal law and represent reimbursable state mandates.

1. CHALLENGED PROGRAM REQUIREMENT

The Permittees challenge Sections XII.B., through XII.E. of the 2009 Permit as they are applied to municipal projects. In sum, to comply with these sections, the Permittees will be required to invest significant resources developing a State-mandated program, and add requirements to municipal projects that will significantly increase the cost of design and construction,. This includes development of a model WQMP that incorporates low impact development and hydromodification BMPs. 2009 Permit section XII.C.1 states:

> Within 12 months of adoption of this order, the permittees shall update the model WQMP to incorporate LID principles (as per Section XII.C) and to address the impact of urbanization on downstream hydrology (as per Section XII.D) and a copy of the updated model WQMP shall be submitted for review and approval by the Executive Officer. As provided in Section XII.J, 90 days after approval of the revised model WQMP, priority development projects shall implement LID principles described in this section, Section XII.C. To the extent that the Executive Officer has not approved the feasibility criteria within 18 months of adoption of this order as provided in Section XII.E.1, the infeasibility of implementing LID BMPs shall be determined through project specific analyses, each of which shall be submitted to the Executive Officer, 30 days prior to permittee approval.

2009 Permit section XII.B.6 additionally requires the Permittees to develop project approval streamlining guidelines for priority development projects, including municipal projects. 2009 Permit section XII.B.6 states:

> Within 12 months from the date of adoption of this order, the principal permittee shall develop recommendations for streamlining regulatory agency approval of regional treatment control BMPs. The recommendations should include information needed to be submitted to the Regional Board for consideration of

[96] *San Diego Unified School Dist. v. Commission on State Mandates* (2004) 33 Cal.4th 859, 887-888.

> regional treatment control BMPs. At a minimum, it should include: BMP location; type and effectiveness in removing pollutants of concern; projects tributary to the regional treatment system; engineering design details; funding sources for construction, operation and maintenance; and parties responsible for monitoring effectiveness, operation and maintenance.

2009 Permit section XII.E.1 includes a similar requirement that the Permittees develop an "in lieu" program for projects that cannot meet the Permit's other low impact development requirements. 2009 Permit section XII.E.1 states:

> Within 12 months of adoption of this order, the principal permittee, in collaboration with the co-permittees, shall develop technically-based feasibility criteria for project evaluation to determine the feasibility of implementing LID BMPs (feasibility to be based in part, on the issues identified in Section XII.C). This plan shall be submitted to the Executive Officer for approval. Only those projects that have completed a vigorous feasibility analysis as per the criteria developed by the permittees and approved by the Executive Officer should be considered for alternatives and in-lieu programs. If a particular BMP is not technically feasible, other BMPs should be implemented to achieve the same level of compliance, or if the cost of BMP implementation greatly outweighs the pollution control benefits, a waiver of the BMPs may be granted. All requests for waivers, along with feasibility analysis including waiver justification documentation, must be submitted to the Executive Officer in writing, 30 days prior to permittee approval.

Once the model WQMP and the in lieu program are developed, municipal projects that qualify as "priority development projects" under the 2009 Permit will be required to implement low impact development and hydromodification BMPs. The requirements are very specific, and dictate which BMPs are required at different types of projects. For example, 2009 Permit section XII.B.2.h. requires specific requirements for road projects:

> Streets, roads, highways and freeways of 5,000 square feet or more of paved surface shall incorporate USEPA guidance, "Managing Wet Weather with Green Infrastructure: Green Streets" in a manner consistent with the maximum extent practicable standard. This category includes any paved surface used for the transportation of automobiles, trucks, motorcycles and other vehicles and excludes any routine road maintenance activities where the footprint is not changed.

In general, all priority development projects must implement low impact development BMPs. Notable requirements in Sections XII.C.3 through XII.C.6. require the following:

> The permittees shall require that each priority development project include site design BMPs during development of the preliminary and final WQMPs. The design goal shall be to maintain or replicate the pre-development hydrologic regime through the use of design techniques that create a functionally equivalent post-development hydrologic regime through site preservation techniques and the use of integrated and distributed micro-scale storm water infiltration, retention, detention, evapotranspiration, filtration and treatment systems as close as feasible to the source of runoff.
>
> The selection of LID principles shall be prioritized in the following manner (from highest to the lowest priority): (1) Preventative measures (these are mostly non-structural measures, e.g., preservation of natural features to a level consistent with the maximum extent practicable standard; minimization of runoff through clustering, reducing impervious areas, etc.) and (2) Mitigation (these are structural measures, such as, infiltration, harvesting and reuse, bio-treatment, etc. The mitigation or structural site design BMPs shall also be prioritized (from highest to lowest priority): (1) Infiltration (examples include permeable pavement with infiltration beds, dry wells, infiltration trenches, surface and sub-surface infiltration basins. All infiltration activities should be coordinated with the groundwater management agencies, such as the Orange County Water District); (2) Harvesting and Re-use (e.g., cisterns and rain barrels); and (3) Bio-treatment such as bio-filtration/bio-retention.
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> * * *
>
> The LID BMPs shall be designed to mimic pre-development site hydrology through technically and economically feasible preventive and mitigative site design techniques. LID combines hydrologically functional site design with pollution prevention methods to compensate for land development impact on hydrology and water quality.

Lastly, the 2009 Permit requires the Permittees to analyze and mitigate downstream impacts related to the volume of water leaving completed priority development projects. 2009 Permit sections XII.D.1. through XII.D.4. require the following:

> Each priority development project shall be required to ascertain the impact of the development on the site's hydrologic regime and include the findings in the WQMP, including the following for a two-year frequency storm event impacts downstream hydrology.
>
> * * *

> If a hydrologic condition of concern exists, then the WQMP shall include an evaluation of whether the project will adversely impact downstream erosion, sedimentation or stream habitat. If the evaluation determines adverse impacts are likely to occur, the project proponent shall implement additional site design controls, on-site management controls, structural treatment controls and/or in-stream controls to mitigate the impacts. The project proponent should first consider site design controls and on-site controls prior to proposing in-stream controls; in-stream controls must not adversely impact beneficial uses or result in sustained degradation of water quality of the receiving waters.
>
> The project proponent may also address hydrologic conditions of concern by mimicking the pre-development hydrograph with the post-development hydrograph, for a two year return frequency storm. Generally, the hydrologic conditions of concern are not significant, if the post-development hydrograph is no more than 10% greater than pre-development hydrograph. In cases where excess volume cannot be infiltrated or captured and reused, discharge from the site must be limited to a flow rate no greater than 110% of the pre-development 2-year peak flow.

2. LID AND HYDROMODIFICATION REQUIREMENTS UNDER FEDERAL LAW

No federal statute, regulation, or policy specifically requires municipal stormwater permits to include the low impact development and hydromodification requirements present in the 2009 Permit. Title 40, section 122.26(d)(2)(iv)(A) of the Code of Federal Regulations provides a general requirement that large municipal stormwater permits include programs to reduce the discharge of pollutants from the MS4 that originate in areas of new development.[97] It does not require design elements such as low impact development, or management practices to control the volume of water leaving a newly developed site.

As stated in *Hayes v. Commission on State Mandates* (1992) 11 Cal.App.4th 1564, "[i]f the state freely chooses to impose the costs upon the local agency as a means of implementing a federal program then the costs are the result of a reimbursable state mandate regardless whether the costs were imposed upon the state by the federal government."[98] Federal law does not require the 2009 Permit to include low impact development and hydromodification programs, yet the state has exercised its discretion to include them in the permit. For that reason, those aspects of the 2009 Permit exceed the requirements of federal law and represent a state mandated program for which the Permittees are entitled to reimbursement.

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[97] 40 C.F.R. § 122.26(d)(2)(iv)(A) requires Large MS4 permits to include "a comprehensive master plan to develop, implement and enforce controls to reduce the discharge of pollutants from municipal separate storm sewers which receive discharges from areas of new development and significant redevelopment."

[98] *Hayes v. Commission on State Mandates* (1992) 11 Cal.App.4th 1564, 1593.

3. REQUIREMENTS FROM 2002 PERMIT

The 2009 Permit represents a significant increase in the permanent BMPs and other controls that the Permittees' must implement for municipal projects. The 2002 Permit's requirements were minimal in comparison.[99] The relevant portions of the 2002 Permit are as follows:

- 2002 Permit section XII.A.2.
- 2002 Permit section XII.A.9.
- 2002 Permit section XII.B.

The requirements from the 2002 Permit were very general compared to the prescriptive requirements in the 2009 Permit. For example, 2002 Permit section XII.B. simply defined which priority development projects were subject to the requirements, and included a general requirement that the Permittees incorporate BMPs for source control, pollution prevention, and/or structural treatment BMPs into their model WQMPs.

4. MANDATED ACTIVITIES

To comply with the low impact development and hydromodification requirements in the 2009 Permit, the Permittees will need to develop and implement low impact development and hydromodification prevention design principles on municipal projects. Projects that are subject to these requirements include municipal yards, recreation centers, civic centers, and road improvements. To date, the Permittees have already incurred significant costs developing the "Green Streets" low impact development program elements that will be applied exclusively to municipal projects. The specific requirements are set forth in sections XII.B. through XII.E. of the 2009 Permit, however, in sum, the Permittees will be required to add the following requirements to municipal projects that qualify as "priority development projects" under the 2009 Permit:

- Develop a program to ensure that water quality protection, including LID principles and "Green Streets" requirements, are incorporated into priority development projects, and implement the program within 18 months of adoption of this 2009 Permit.
- Incorporate EPA guidance, "Managing Wet Weather with Green Infrastructure: Green Streets" for all streets, roads, highways and freeways of 5,000 square feet or more of paved surface.
- Include BMPs for source control, pollution prevention, site design, LID implementation and structural treatment control BMPs.

[99] A copy of the 2002 Permit is included under Section 7 - Documentation to these Test Claims.

- Infiltrate, harvest and re-use, evapotranspire, or bio-treat the 85th percentile storm event at completed project sites.

- Maintain or replicate the pre-development hydrologic regime through the use of design techniques that create a functionally equivalent post-development hydrologic regime through site preservation techniques and the use of integrated and distributed micro-scale storm water infiltration, retention, detention, evapotranspiration, filtration and treatment systems as close as feasible to the source of runoff.

- Limit disturbance of natural water bodies and drainage systems; conserve natural areas; preserve trees; minimize compaction of highly permeable soils; protect slopes and channels; and minimize impacts from storm water and urban runoff on the biological integrity of natural drainage systems and water bodies.

- Minimize changes in hydrology and pollutant loading; require incorporation of controls, including structural and non-structural BMPs, to mitigate the projected increases in pollutant loads and flows; ensure that post-development runoff durations and volumes from a site have no significant adverse impact on downstream erosion and stream habitat; minimize the quantity of storm water directed to impermeable surfaces and the MS4s; minimize paving, minimize runoff by disconnecting roof leader and other impervious areas and directing the runoff to pervious and/or landscaped areas, minimize directly connected impervious areas; design impervious areas to drain to pervious areas; consider construction of parking lots, walkways, etc., with permeable materials; minimize pipes, culverts and engineered systems for storm water conveyance thereby minimizing changes to time of concentration on site; utilize rain barrels and cisterns to collect and re-use rainwater; maximize the use of rain gardens and sidewalk storage; and maximize the percentage of permeable surfaces distributed throughout the site's landscape to allow more percolation of storm water into the ground.

- Preserve wetlands, riparian corridors, vegetated buffer zones and establish reasonable limits on the clearing of vegetation from the project site.

- Use properly designed and well maintained water quality wetlands, bio-retention areas, filter strips and bio-filtration swales; consider replacing curbs gutters and conventional storm water conveyance systems with bio-treatment systems, where such measures are likely to be effective and technically and economically feasible.

- Evaluate whether the project will adversely impact downstream erosion, sedimentation or stream habitat, and develop a hydrograph with pre- and post-development time of concentration for a 2-year frequency storm event. If the evaluation determines adverse impacts are likely to occur,

implement additional site design controls, on-site management controls, structural treatment controls and/or in-stream controls to mitigate the impacts.

- If site conditions do not permit infiltration, harvesting and re-use, and/or evapotranspiration, and/or bio-treatment of the design capture volume at the project site as close to the source as possible, implement an in lieu/mitigation project, in addition to treating the storm water on site.

5. ACTUAL AND ESTIMATED REIMBURSABLE COSTS

To comply with 2009 Permit's low impact development and hydromodification requirements on municipal projects, the Permittees will be required to expend time in Fiscal Year ("FY") 2009-10, and each year thereafter, to develop, administer and maintain a costly program. To date, the Permittees have retained private consultants to develop the program, and plan to expend significant resources in future fiscal years. The Permittees' increase in costs to comply with these mandated activities in FY 2009-10 are set forth in Exhibit A to this Narrative Statement and in the attached declarations from the Permittees that are parties to this Test Claim. The cost allocations set forth in Exhibit A are based on the allocations described in the Program Implementation Agreement enclosed with this Narrative Statement as Exhibit B. The cost of future compliance will vary depending on each municipal project that will be subject to the 2009 Permit's low impact development and hydromodification requirements.

C. SECTION XIII OF THE 2009 PERMIT MANDATES NEW PUBLIC EDUCATION REQUIREMENTS THAT GO BEYOND THE FEDERAL LAW REQUIREMENT THAT AN MS4 PERMIT INCLUDE AN EDUCATION COMPONENT WITHOUT SPECIFYING THE ELEMENTS OF THAT PROGRAM.

1. CHALLENGED PROGRAM REQUIREMENT

The 2009 Permit increases the public education requirements imposed on the Permittees, creating at least six new program requirements. The relevant portions of the 2009 Permit require the Permittees to implement the following:

XIII. PUBLIC EDUCATION AND OUTREACH

1. The permittees shall continue to implement the public education efforts already underway and shall implement the most effective elements of the comprehensive public and business education strategy contained in the Report of Waste Discharge/DAMP. By July 1, 2012, the permittees shall complete a public awareness survey to determine the effectiveness of the current public and business education strategy and any need for changes to the current multimedia public education efforts. The findings of the survey and any proposed changes to the current program shall be included in the annual report for 2011-2012.

2. The permittees shall sponsor or staff a storm water table or booth at community, regional, and/or countywide events to distribute public education materials to the public. Each permittee shall participate in at least one event per year.

3. The permittees shall continue to participate in the Public Education Committee to review and update existing guidance for the implementation of the public education program. The Public Education Committee shall meet at least twice per year. The Public Education Committee shall continue to make recommendations for any changes to the public and business education program including: how to make the multimedia efforts more effective; a reevaluation of audiences and key messages for targeted behaviors; and opportunities for participation in regional and statewide public education efforts. The goal of the public and business education program shall be to target 100% of the residents, including businesses, commercial and industrial establishments. Through use of local print, radio and television, the permittees must ensure that the public and business education program makes a minimum of 10 million impressions per year and that those impressions measurably increase the knowledge and measurably change the behavior of the targeted groups.

4. The permittees shall continue their outreach and other public education activities. Each permittee should try to reach the following sectors: manufacturing facilities; mobile service industry; commercial, distribution and retail sales industry; residential/commercial landscape construction and services industry; residential and commercial construction industry; and residential and community activities. Individual workshops (or regional workshops) for each of the aforementioned elements shall be administered by each permittee (or on a countywide basis) by July 1, 2010 and on an annual basis thereafter. Commercial and industrial facility inspectors shall distribute developed educational information (Fact Sheets) to these facilities during inspections. Further, for restaurant, automotive service centers and gasoline service station corporate chains, new information or that which has been previously developed shall be provided to corporate environmental managers during outreach visits that should take place twice during the permit term. Some of these outreach activities could be conducted through the chamber of commerce or other similar establishments. The outcomes from all outreach requirements contained herein shall be reported in the applicable annual reports.

5. The permittees shall further develop and maintain public education materials to encourage the public to report illegal dumping and unauthorized, non-storm water discharges from residential, industrial, construction and commercial sites into public streets, storm drains and to surface waterbodies and their tributaries; clogged storm drains; faded or missing catch basin stencils and general storm water and BMP information. Hotline and web site information shall be included in the public and business education program and shall be listed in the governmental pages of all regional phone books and on the permittees' website.

6. Within 12 months from the date of adoption of this order, the permittees shall further develop and maintain BMP guidance for the control of those potentially polluting activities identified during the previous permit cycle, which are not otherwise regulated by any agency, including guidelines for the household use of fertilizers, pesticides, herbicides and other chemicals, and guidance for mobile vehicle maintenance, carpet cleaners, commercial landscape maintenance, and pavement cutting. These guidance documents shall be distributed to the public, trade associations, etc., through participation in community events, trade association meetings and/or by mail.

7. The principal permittee, in collaboration with the Co-permittees, shall develop and implement a mechanism for public participation in the updating and implementation of the Drainage Area Management Plans, monitoring plans, Water Quality Management Plan guidance and Fact Sheets for various activities. The public shall be informed of the availability of these documents through public notices in local

newspapers, County and/or city websites, local libraries/city halls and/or courthouses.

2. REQUIREMENTS OF FEDERAL LAW

Neither the 2009 Permit, nor any of its supporting documents, specifically identify any federal regulations as specific authority for the 2009 Permit's public education requirements, and no federal statute, regulation, or policy specifically requires large municipal stormwater permits to include the public education requirements present in the 2009 Permit. Title 40, sections 122.26(d)(2)(iv)(A)(6), (B)(6), and (D)(4) of the Code of Federal Regulations provide general public education requirements for large municipal stormwater permits,[100] they do not, however require anywhere near the level of specificity that the Santa Ana RWQCB has included in the 2009 Permit.

Where the state freely chooses to impose costs associated with a new program or higher level of service upon a local agency as a means of implementing a federal program, then the costs represent a reimbursable state mandate.[101] Federal law does not require the 2009 Permit to include the highly specific public education program in the 2009 Permit, yet the state has exercised its discretion to impose that program on the Permittees. For that reason, the public education requirements in the 2009 Permit exceed federal law and represent a state mandated program.

3. REQUIREMENTS FROM 2002 PERMIT

The 2009 Permit requires the Permittees to implement several new requirements that were not included in the 2002 Permit. The relevant portions of the 2002 Permit are as follows:

- Section XIII. Public Education

The Public Education requirements in the 2002 Permit were similar to those in the 2009 Permit. The 2002 Permit established many of the programs in the 2009 Permit. The 2009 Permit, however, includes several new requirements that were either suggested in the 2002

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[100] 40 C.F.R. § 122.26(d)(2)(iv)(A)(6) requires large municipal stormwater permits to include:

> [A] program to reduce to the maximum extent practicable, pollutants in discharges from municipal separate storm sewers associated with the application of pesticides, herbicides and fertilizer which will include, as appropriate, controls such as educational activities, permits, certifications and other measures for commercial applicators and distributors, and controls for application in public right-of-ways and at municipal facilities.

40 C.F.R. § 122.26(d)(2)(iv)(B)(6) requires large municipal stormwater permits to include:

> [E]ducational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials.

40 C.F.R. § 122.26(d)(2)(iv)(D)(4) requires large municipal stormwater permits to include:

> Appropriate educational and training measures for construction site operators.

[101] *Hayes v. Commission on State Mandates* (1992) 11 Cal.App.4th 1564, 1593; *Long Beach Unified School District v. State of California* (1990) 225 Cal.App.3d 155.

Permit, or not included in the 2002 Permit. The new requirements are set forth in greater detail below.

4. MANDATED ACTIVITIES

The 2009 Permit imposes at least six new public education requirements on the Permittees. As these requirements exceed federal law, they represent state mandates for which the Permittees are entitled to reimbursement. The new program areas are as follows:

1. By July 1, 2012, the permittees shall complete a public awareness survey to determine the effectiveness of the current public and business education strategy and provide a future action plan any need for changes to the current multimedia public education efforts. The findings of the survey and any proposed changes to the current program shall be included in the annual report for 2011-2012. (2009 Permit section XIII.1.)

2. The Public Education Committee shall continue to make recommendations for any changes to the public and business education program, including: how to make the multimedia efforts more effective; a reevaluation of audiences and key messages for targeted behaviors; and opportunities for participation in regional and statewide public education efforts. (2009 Permit section XIII.3.)

3. The permittees shall continue their outreach and other public education activities. Each permittee should try to reach the following sectors: manufacturing facilities; mobile service industry; commercial, distribution and retail sales industry; residential/commercial landscape construction and services industry; residential and commercial construction industry; and residential and community activities. Individual workshops (or regional workshops) for each of the aforementioned elements shall be administered by each permittee (or on a countywide basis) by July 1, 2010 and on an annual basis thereafter. Commercial and industrial facility inspectors shall distribute developed educational information (Fact Sheets). (2009 Permit section XIII.4.)

4. The permittees shall further develop and maintain public education materials to encourage the public to report (including a hotline number and web site to report) illegal dumping and unauthorized, non-storm water discharges . . . (2009 Permit section XIII.5.)

5. Within 12 months from the date of adoption of this order, the permittees shall further develop and maintain BMP guidance for the control of those potentially polluting activities identified during the previous permit cycle, which are not otherwise regulated by any agency, including guidelines for the household use of fertilizers, pesticides, herbicides and other chemicals, and guidance for mobile vehicle maintenance, carpet cleaners, commercial

landscape maintenance, and pavement cutting. (2009 Permit section XIII.6.)

6. The principal permittee, in collaboration with the Co-permittees, shall develop and implement a mechanism for public participation in the updating and implementation of the Drainage Area Management Plans, monitoring plans, Water Quality Management Plan guidance and Fact Sheets for various activities. The public shall be informed of the availability of these documents through public notices in local newspapers, County and/or city websites, local libraries/city halls and/or courthouses. (2009 Permit section XIII.7.)

5. ACTUAL AND ESTIMATED REIMBURSABLE COSTS

To comply with 2009 Permit's public education requirements, the Permittees have expended time and resources in FY 2009-10, and will continue to do so each year thereafter, to develop, administer and maintain the program. The Permittees' costs to comply with these mandated activities are set forth in Exhibit A to this Narrative Statement and in the attached declarations from the Permittees that are parties to this Test Claim. The cost allocations set forth in Exhibit A are based on the allocations described in the Program Implementation Agreement enclosed with this Narrative Statement as Exhibit B.

D. SECTION XI OF THE 2009 PERMIT MANDATES THAT THE PERMITTEES DEVELOP A PROGRAM TO REDUCE DISCHARGES OF POLLUTANTS FROM RESIDENTIAL FACILITIES AND MANDATES VERY SPECIFIC ELEMENTS OF THAT PROGRAM. THESE PROVISIONS GO BEYOND THE REQUIREMENTS OF FEDERAL LAW AND ARE UNFUNDED STATE MANDATES.

1. CHALLENGED PROGRAM REQUIREMENT

The 2009 Permit requires the Permittees to develop and implement a new program to regulate discharges from residential areas. The relevant portions of the 2009 Permit require the Permittees to implement the following:

XI. RESIDENTIAL PROGRAM

1. Each permittee shall develop and implement a residential program to reduce the discharge of pollutants from residential facilities to the MS4s consistent with the maximum extent practicable standard so as to prevent discharges from the MS4s from causing or contributing to a violation of water quality standards in the receiving waters.

2. The permittees should identify residential areas and activities that are potential sources of pollutants and develop Fact Sheets/BMPs. At a minimum, this should include: residential auto washing and maintenance activities; use and disposal of pesticides, herbicides, fertilizers and household cleaners; and collection and disposal of pet wastes. The permittees shall encourage residents to implement pollution prevention measures. The permittees should work with sub-watershed groups (e.g., the Serrano Creek Conservancy) to disseminate latest research information, such as the UC Master Gardeners Program46 and USDA's Backyard Conservation Program.

3. The permittees, collectively or individually, shall facilitate the proper collection and management of used oil, toxic and hazardous materials, and other household wastes. Such facilitation should include educational activities, public information activities, and establishment of curbside or special collection sites managed by the permittees or private entities, such as solid waste haulers.

4. Within 18 months of adoption of this order, the permittees shall develop a pilot program to control pollutant discharges from common interest areas and areas managed by homeowner associations or management companies. The permittees should evaluate the applicability of programs such as the Landscape Performance Certification Program48 to encourage efficient water use and to minimize runoff.

5. The permittees shall enforce their Water Quality Ordinance for all residential areas and activities. The permittees should encourage new developments to use weather-based evapotranspiration (ET) irrigation controllers50.

6. Each permittee shall include an evaluation of its Residential Program in the annual report starting with the first annual report after adoption of this order.

2. REQUIREMENTS OF FEDERAL LAW

No federal statute, regulation, or policy specifically requires large municipal stormwater permits to include a residential program as required by the 2009 Permit. Code of Federal Regulations, Title 40, sections 122.26(d)(2)(iv)(A) generally requires large municipal stormwater permits to include:

> structural and source control measures to reduce pollutants from runoff from commercial and residential areas that are discharged from the municipal storm sewer system that are to be implemented during the life of the permit, accompanied with an estimate of the expected reduction of pollutant loads and a proposed schedule for implementing such controls.

Federal regulations do not, however require anywhere near the level of specificity that the Santa Ana RWQCB has included in the 2009 Permit. As stated above, where the state freely chooses to impose costs associated with a new program or higher level of service upon a local agency as a means of implementing a federal program, then the costs represent a reimbursable state mandate.[102] Federal law does not require the 2009 Permit to include the highly specific residential program in the 2009 Permit, yet the state has exercised its discretion to impose that program on the Permittees. For that reason, the residential program requirements in the 2009 Permit exceed federal law and represent a state mandated program.

3. REQUIREMENTS FROM 2002 PERMIT

The 2002 Permit does not require the Permittees to develop and implement a Residential program. The closest the 2002 Permit comes to requiring the Permittees to implement such a program is to require the Permittees to include a residential reporting component in paragraph 4 of the Section XIII. Public Education.

4. MANDATED ACTIVITIES

Because the 2002 Permit did not require the Permittees to develop and implement a Residential program, the entire Residential program from the 2009 Permit represents a State mandate for which the Permittees are entitled to reimbursement. The requirements are as follows:

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[102] *Hayes v. Commission on State Mandates* (1992) 11 Cal.App.4th 1564, 1593.

1. Each permittee shall develop and implement a residential program to reduce the discharge of pollutants from residential facilities to the MS4s consistent with the maximum extent practicable standard so as to prevent discharges from the MS4s from causing or contributing to a violation of water quality standards in the receiving waters.

2. The permittees should identify residential areas and activities that are potential sources of pollutants and develop Fact Sheets/BMPs. At a minimum, this should include: residential auto washing and maintenance activities; use and disposal of pesticides, herbicides, fertilizers and household cleaners; and collection and disposal of pet wastes. The permittees shall encourage residents to implement pollution prevention measures. The permittees should work with sub-watershed groups (e.g., the Serrano Creek Conservancy) to disseminate latest research information, such as the UC Master Gardeners Program46 and USDA's Backyard Conservation Program.

3. The permittees, collectively or individually, shall facilitate the proper collection and management of used oil, toxic and hazardous materials, and other household wastes. Such facilitation should include educational activities, public information activities, and establishment of curbside or special collection sites managed by the permittees or private entities, such as solid waste haulers.

4. Within 18 months of adoption of this order, the permittees shall develop a pilot program to control pollutant discharges from common interest areas and areas managed by homeowner associations or management companies. The permittees should evaluate the applicability of programs such as the Landscape Performance Certification Program48 to encourage efficient water use and to minimize runoff.

5. The permittees shall enforce their Water Quality Ordinance for all residential areas and activities. The permittees should encourage new developments to use weather-based evapotranspiration (ET) irrigation controllers.

6. Each permittee shall include an evaluation of its Residential Program in the annual report starting with the first annual report after adoption of this order.

5. ACTUAL AND ESTIMATED REIMBURSABLE COSTS

To comply with 2009 Permit's residential program requirements, the Permittees have expended time and resources in FY 2009-10, and will continue to do so each year thereafter, to develop, administer and maintain the program. The Permittees' costs to comply with these mandated activities are set forth in Exhibit A to this Narrative Statement and in the attached declarations from the Permittees that are parties to this Test Claim. The cost allocations set forth in Exhibit A are based on the allocations described in the Program Implementation Agreement enclosed with this Narrative Statement as Exhibit B.

E. SECTIONS IX (MUNICIPAL INSPECTIONS OF INDUSTRIAL FACILITIES) AND X (MUNICIPAL INSPECTIONS OF COMMERCIAL FACILITIES) OF THE 2009 PERMIT MANDATE THAT THE PERMITTEES DEVELOP A GEOGRAPHICAL INFORMATION SYSTEM (GIS) FOR INDUSTRIAL FACILITIES AND NEWLY SPECIFIED COMMERCIAL FACILITIES WHICH GOES BEYOND THE REQUIREMENTS OF FEDERAL LAW AND IS AN UNFUNDED STATE MANDATE.

The 2009 Permit mandates that the Permittees develop a Geographic Information System ("GIS") as part of both the inspection program for industrial facilities (Section IX) and the inspection program for commercial facilities (Section X). This requirement goes beyond the requirements of Federal Law.

MUNICIPAL INSPECTIONS OF INDUSTRIAL FACILITIES

1. CHALLENGED PROGRAM REQUIREMENT

Section IX.1 (MUNICIPAL INSPECTIONS OF INDUSTRIAL FACILITIES) of the 2009 Permit provides as follows:

> "Each permittee shall continue to maintain an inventory of industrial facilities within its jurisdiction. All sites that have the potential to discharge pollutants to the MS4 should be included in this inventory regardless of whether the facility is subject to business permits, licensing, the State's General Industrial Permit or other individual NPDES permit. This database must be updated on an annual basis. This inventory must be maintained in an computer-based database system and must include relevant information on ownership, SIC code(s), General Industrial Permit WDID # (if any), size, location, etc. Inclusion of a Geographical Information System (GIS) is required, with latitude/longitude (in decimals) or NAD83/WGS84[103] compatible formatting is required."

Section IX.1 of page 41 of 2009 Permit (emphasis added).

2. REQUIREMENTS OF FEDERAL LAW

Neither the 2009 Permit, nor any of its supporting documents, specifically identify any federal regulations as specific authority for imposition of the GIS requirement set forth in Section IX.1 of the 2009 Permit. Moreover, the CWA does not specifically require the use of GIS as a part of a municipal inventory of industrial facilities. 40 C.F.R. 122.26(d)(2)(ii) states

[103] NAD 83/WGS84 = North American Datum of 1983 and World Geodetic System of 1984 are systems to define three-dimensional coordinates of a single physical point. See footnote 38 of page 39 of 2009 Permit.

that the following should be provided in the permit: "[A]n inventory, organized by watershed of the name and address, and a description (such as SIC codes) which best reflects the principal products or services provided by each facility which may discharge, to the municipal separate storm sewer, storm water associated with industrial activity."

40 C.F.R. 122.26(d)(2)(ii)does not, however, expressly require or mention the use of GIS as part of municipal inspection of industrial facilities. Thus, the 2009 Permit's requirement for the inclusion of a GIS as part of a municipal inventory of industrial facilities is an unfunded state mandate.[104]

3. REQUIREMENTS FROM 2002 PERMIT

The 2002 Permit provided that each Permittee:

- Develop an inventory of the industrial facilities within its jurisdiction and maintain such inventory in a computer-based database system.
- Include relevant information on ownership, SIC code(s), General Industrial Permit WDID # (if any), size, location, etc. in the computer-based database system.
- Update the inventory computer-based database on an annual basis

The 2002 Permit did not require, that Permittees include a GIS as part of its inventory of industrial facilities in a computer-based database system. The 2002 Permit merely recommended, as opposed to required, that a GIS be included. *See* Section IX.1 of page 22 of the 2002 Permit for complete text.

4. MANDATED ACTIVITIES

Section IX.1 of the 2009 Permit requires Permittees to perform the following activities that are **not** required under either federal law or the 2002 Permit:

- In the inventory of industrial facilities, include a Geographical Information System, with latitude/longitude (in decimals) or NAD83/WGS8442 compatible formatting.

To comply with the GIS requirement set forth in Section IX.1, many of the Permittees have or will need to perform the following activities to comply with the new GIS requirement:

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[104] The test claimants further note that a slightly more recent Water Board stormwater permit issued by this same region (Santa Ana) does not include the GIS mandate for a database of municipal inspections of industrial or commercial facilities. *See, e.g.*, Exhibit 17, California Regional Water Quality Control Board (Santa Ana Region), Order No. R8-2010-0033 (Jan. 29, 2010), Sections XI.C. and XI.D (inspection requirements), and Section XI.A (General requirement of database inventory of active industrial and commercial facilities within their jurisdiction). Thus, the Santa Ana Board's decision to mandate GIS in this case clearly goes beyond not only federal law but also the Santa Ana Board's own understanding of federal law mandates based upon its January 29, 2010 stormwater permit issued to a different group of permittees.

1. Purchase computer server and operating software compatible with GIS;

2. Hire a consultant to prepare aerial digital photographs of the Permittees' jurisdictions;

3. Hire a consultant to develop a GIS browser;

4. Purchase the Orange County Assessor database;

5. Hire a consultant to digitize all stormdrain systems and develop a storm drain system digital map; and

6. Hire a consultant to develop a GIS layer that includes all commercial, industrial and restaurant facilities that are inspected for stormwater compliance.

5. ACTUAL AND ESTIMATED REIMBURSABLE COSTS

To comply with Section IX.1 of the 2009 Permit, the Permittees will be required to expend time in FY 2009-10, and each year thereafter, to develop, administer and maintain a costly Geographical Information System. The Permittees' costs to comply with these mandated activities are set forth in Exhibit A to this Narrative Statement and in the attached declarations from the Permittees that are parties to this Test Claim. The cost allocations set forth in Exhibit A are based on the allocations described in the Program Implementation Agreement enclosed with this Narrative Statement as Exhibit B.

F. MUNICIPAL INSPECTIONS OF COMMERCIAL FACILITIES

1. CHALLENGED PROGRAM REQUIREMENT

Section X.1. of the 2009 Permit provides as follows:

"X. MUNICIPAL INSPECTIONS OF COMMERCIAL FACILITIES

1. Each permittee shall continue to maintain and update quarterly an inventory of the types of commercial facilities/businesses listed below within its jurisdiction. As required under the third term permit, this inventory must be maintained in a computer-base database system (Commercial Database) and must include relevant information on ownership, size, location, etc. For fixed facilities, inclusion of a Geographical Information System (GIS), with latitude/longitude (in decimals) or NAD83/WGS84 compatible formatting is required. For water quality planning purposes, the permittees should consider using a parcel-level GIS that contains an inventory of the types of facilities/discharges listed below.

Commercial facilities may include, but may not be limited to:

a) Transport, storage or transfer of pre-production plastic pellets;

b) Automobile mechanical repair, maintenance, fueling or cleaning;

c) Airplane maintenance, fueling or cleaning;

d) Marinas and boat maintenance, fueling or cleaning;

e) Equipment repair, maintenance, fueling or cleaning;

f) Automobile impound and storage facilities;

g) Pest control service facilities;

h) Eating or drinking establishments, including food markets and restaurants;

i) Automobile and other vehicle body repair or painting;

j) Building materials retail and storage facilities;

k) Portable sanitary service facilities;

l) Painting and coating;

m) Animal facilities such as petting zoos and boarding and training faculties;

n) Nurseries and greenhouses;

o) Landscape and hardscape installation;

p) Pool, lake and fountain cleaning;

q) Golf courses;

r) Other commercial sites/sources that the permittee determines may contribute a significant pollutant load to the MS4; and

s) Any commercial site or sources that are tributary to and within 500 feet of an area defined by the Ocean Plan as an Area of Special Biological Significance."

2 REQUIREMENTS OF FEDERAL LAW

Neither the 2009 Permit, nor any of its supporting documents specifically identify any federal regulations as specific authority for imposition of the requirements set forth in Section X.1 of the 2009 Permit. Although 40 C.F.R. § 122.26(d)(2)(iv)(A) provides that management programs describe "structural and source control measures to reduce pollutants from runoff from commercial and residential areas that are discharged from the municipal storm sewer system", it does not specifically require quarterly municipal inspection of the commercial

facilities specified in the 2009 Permit. Moreover, there is no express requirement or mention of the use of GIS as part of municipal inspection of commercial facilities in the CWA or the federal regulations. As such, the 2009 Permit's requirement for the inclusion of a GIS as part of a municipal inventory of commercial facilities is an unfunded state mandate.

3 REQUIREMENTS FROM 2002 PERMIT

The 2002 Permit provided that each Permittee:

- Develop an inventory of the specified commercial facilities and companies within its jurisdiction and maintain such inventory in a computer-based database system.
- Include relevant information on ownership, size, location, etc. in the computer-based database system.
- Update the inventory computer-based database on an annual basis

The 2002 Permit did not, however, require, that Permittees include a GIS as part of its inventory of commercial facilities and businesses in a computer-based database system. The 2002 Permit merely recommended, as opposed to require, that a GIS be included. *See* Section X.1 of the 2002 Permit for complete text.

Moreover, the 2002 Permit only required that the computer-based database for the inventory of commercial facilities be updated on annual basis, as opposed to a quarterly basis as set forth in the 2009 Permit.

In addition, Section X.1 of the 2009 Permit adds 11 new categories[105] of commercial facilities that are subject to municipal inspections that were not in the 2002 Permit. The Regional Board provides no legal justification or authority stating that these 11 new categories pose a significant water quality threat to the MS4. There appears to be no legal authority warranting the inclusion of these 11 new categories of commercial facilities and no evidence that these 11 categories are significant non-point source polluters.

4 MANDATED ACTIVITIES

Section X.1 of the 2009 Permit requires Permittees to perform the following activities that are **not** required under either federal law or the 2002 Permit:

[105] These 11 new categories of commercial facilities are: (a) Transport, storage or transfer of pre-production plastic pellets; (c)Airplane maintenance, fueling or cleaning; (d) Marinas and boat maintenance, fueling or cleaning; (e) Equipment repair, maintenance, fueling or cleaning; (f) Automobile impound and storage facilities; (g) Pest control service facilities; (h) Eating or drinking establishments, including food markets and restaurants; (j) Building materials retail and storage facilities; (k) Portable sanitary service facilities; (m) Animal facilities such as petting zoos and boarding and training faculties; and (q) Golf courses. See Section X.1 on page 43 of the 2009 Permit.

- Include a Geographical Information System, with latitude/longitude (in decimals) or NAD83/WGS8442 compatible formatting that contains an inventory of the following types of facilities and discharges:
    - Transport, storage or transfer of pre-production plastic pellets;
    - Automobile mechanical repair, maintenance, fueling or cleaning;
    - Airplane maintenance, fueling or cleaning;
    - Marinas and boat maintenance, fueling or cleaning;
    - Equipment repair, maintenance, fueling or cleaning;
    - Automobile impound and storage facilities;
    - Pest control service facilities;
    - Eating or drinking establishments, including food markets and restaurants;
    - Automobile and other vehicle body repair or painting;
    - Building materials retail and storage facilities;
    - Portable sanitary service facilities;
    - Painting and coating;
    - Animal facilities such as petting zoos and boarding and training faculties;
    - Nurseries and greenhouses;
    - Landscape and hardscape installation;
    - Pool, lake and fountain cleaning;
    - Golf courses;
    - Other commercial sites/sources that the permittee determines may contribute a significant pollutant load to the MS4; and
    - Any commercial site or sources that are tributary to and within 500 feet of an area defined by the Ocean Plan as an Area of Special Biological Significance.

Lastly, to comply with the requirements of Section IX.1, many of the Permittees have or will need to perform the following activities to comply with the new GIS requirement:

1. Purchase computer server and operating software compatible with GIS;

2. Hire a consultant to prepare aerial digital photographs of the Permittees' jurisdictions;

3. Hire a consultant to develop a GIS browser;

4. Purchase the Orange County Assessor database;

5. Hire a consultant to digitize all stormdrain systems and develop a storm drain system digital map; and

6. Hire a consultant to develop a GIS layer that includes all commercial, industrial, and restaurant facilities that are inspected for stormwater compliance.

5 ACTUAL AND ESTIMATED REIMBURSABLE COSTS

To comply with Section X.1 of the 2009 Permit, the Permittees will be required to expend time in FY 2009-10, and each year thereafter, to develop, administer and maintain a costly Geographical Information System. The Permittees' costs to comply with these mandated activities are set forth in Exhibit A to this Narrative Statement and in the attached declarations from the Permittees that are parties to this Test Claim. The cost allocations set forth in Exhibit A are based on the allocations described in the Program Implementation Agreement enclosed with this Narrative Statement as Exhibit B.

VII. STATEWIDE COST ESTIMATE

The 2009 Permit only relates to the portions of Orange County within the Santa Ana Region and therefore the cost estimates provided relate only to the portions of Orange County within the Santa Ana Region. Those costs are detailed in the declarations submitted in support of this Test Claim and in Exhibit A to this Narrative Statement.

VIII. FUNDING SOURCES

The Permittees are not aware of any State, federal or non-local agency funds that are or will be available to fund these new activities. The Permittees do not have fee authority to offset these costs.

IX. PRIOR MANDATE DETERMINATIONS

A. Los Angeles County

In 2003 and 2007, the County of Los Angeles and 14 cities within the county (the Los Angeles claimants) submitted test claims 03-TC-04, 03-TC-19, 03-TC-20, and 03-TC-21. The test claims asserted that provisions of Los Angeles Water Board Order 01 -1 82 constitute

reimbursable state mandates. As is the case with the Regional Board Order that is the subject of this Test Claim, Order 01-182 was the 2001 renewal of the existing MS4 Permit. Order 01-182 is the MS4 Permit for Los Angeles County and most of its incorporated cities, and serves as an NPDES permit. The permit provisions require the Los Angeles claimants to install and maintain trash receptacles at specified transit stops and to inspect certain industrial, construction, and commercial facilities for compliance with local and/or state storm water requirements.

On September 3, 2009, the Commission issued a final decision entitled In re Test Claim On: Los Angeles Regional Quality Control Board Order No. 01-182, Case Nos.: 03-TC-04, 03-TC-19, 03-TC-20, 03-TC-21 ("Los Angeles Decision"). The Los Angeles Decision partially approved the test claims. The Commission found the trash receptacle requirement to be a reimbursable state mandate.

B. San Diego County

In 2007, the County of San Diego and 21 cities within the county (the San Diego claimants) submitted test claim 07-TC-09. The test claim asserted that many provisions of San Diego Water Board Order R9-2007-0001 constitute reimbursable state mandates. Order R9-2007-0001 is the 2007 renewal of the municipal storm water permit for San Diego County and many of its incorporated cities, and serves as an NPDES permit. The challenged permit provisions require the San Diego claimants to: (1) conduct and report on street sweeping activities; (2) clean and report on storm sewer cleaning; (3) implement a regional urban runoff management program; (4) assess program effectiveness; (5) conduct public education and outreach; (6) collaborate among Permittees to implement the program; (7) implement hydromodification management plans; and (8) implement plans for low impact development.

On March 30, 2010, the Commission issued a final decision entitled In re Test Claim on: San Diego Regional Quality Control Board Order No. R9-2007-0001, Case No. 07-TC-09 (San Diego Decision). The San Diego Decision partially approved the test claim. The Commission's decision took the relatively narrow Los Angeles Decision to its logical conclusion. The Commission found the following permit requirements to be reimbursable state mandates:

1. Street Sweeping
2. Street Sweeping Reporting
3. Conveyance System Cleaning
4. Conveyance System Cleaning Reporting
5. Public Education Requirements with Specific Target Communities and Specified Topics
6. Mandatory Watershed Activities and Collaboration in Watershed Urban Management Program
7. Regional Urban Runoff Management Program

8. Program Effectiveness Assessment

9. Long-term Effectiveness Assessment

10. Permittee Collaboration

The Commission also found the hydromodification and low impact development requirements in the San Diego Permit to be state mandates, but not reimbursable mandates because the local agencies could charge fees to pay for these programs.

X. CONCLUSION

The 2009 Permit imposes many new mandated activities and programs on the Permittees. As detailed above the costs to develop and implement these new programs and activities are substantial. The Permittees believe that the costs incurred and to be incurred satisfy all the criteria for reimbursable mandates and respectfully requests that the Commission make such findings as to each of the mandated programs and activities set forth herein.2

EXHIBIT A

SUMMARY OF PROGRAM COSTS

UNFUNDED MANDATES TEST CLAIM
Cost Sharing Summary For Countywide Program/Region Specific Elements
NPDES Santa Ana Permittees
Fiscal Year 2009-10

Permittee	Residential Program	Pub Ed Workshops	Public Education Survey	Public Particpation	LID/WQMP	TOTAL
Anaheim	$0.00	$745.09	$6,623.01	$206.97	$4,967.26	**$12,542.33**
Brea	$0.00	$122.79	$1,091.48	$34.11	$818.61	**$2,066.99**
Buena Park	$0.00	$170.07	$1,511.74	$47.24	$1,133.80	**$2,862.86**
Costa Mesa	$0.00	$244.04	$2,169.26	$67.79	$1,626.94	**$4,108.04**
Cypress	$0.00	$103.15	$916.85	$28.65	$687.64	**$1,736.29**
Fountain Valley	$0.00	$128.83	$1,145.18	$35.79	$858.89	**$2,168.69**
Fullerton	$0.00	$309.76	$2,753.45	$86.05	$2,065.08	**$5,214.34**
Garden Grove	$0.00	$331.56	$2,947.18	$92.10	$2,210.38	**$5,581.22**
Huntington Beach	$0.00	$420.03	$3,733.64	$116.68	$2,800.23	**$7,070.58**
Irvine	$0.00	$665.34	$5,914.13	$184.82	$4,435.60	**$11,199.88**
La Habra	$0.00	$124.65	$1,107.97	$34.62	$830.97	**$2,098.21**
La Palma	$0.00	$31.57	$280.61	$8.77	$210.46	**$531.41**
Laguna Hills (17.77% in SAR)	$0.00	$14.65	$130.26	$4.07	$97.69	**$246.68**
Laguna Woods (51.97% in SAR)	$0.00	$22.58	$200.68	$6.27	$150.51	**$380.03**
Lake Forest (68.68% in SAR)	$0.00	$137.65	$1,223.59	$38.24	$917.69	**$2,317.17**
Los Alamitos	$0.00	$27.67	$245.93	$7.69	$184.45	**$465.74**
Newport Beach	$0.00	$257.82	$2,291.69	$71.62	$1,718.77	**$4,339.89**
Orange	$0.00	$335.43	$2,981.60	$93.17	$2,236.20	**$5,646.40**
Placentia	$0.00	$106.21	$944.11	$29.50	$708.08	**$1,787.91**
Santa Ana	$0.00	$620.87	$5,518.85	$172.46	$4,139.13	**$10,451.32**
Seal Beach	$0.00	$57.24	$508.83	$15.90	$381.62	**$963.59**
Stanton	$0.00	$69.24	$615.46	$19.23	$461.60	**$1,165.53**
Tustin	$0.00	$162.52	$1,444.63	$45.14	$1,083.47	**$2,735.77**
Villa Park	$0.00	$20.42	$181.48	$5.67	$136.11	**$343.69**
Westminster	$0.00	$179.88	$1,598.94	$49.97	$1,199.21	**$3,028.00**
Yorba Linda	$0.00	$205.64	$1,827.92	$57.12	$1,370.94	**$3,461.62**
County of Orange (48.15% in SAR)	$0.00	$573.94	$5,101.68	$159.43	$3,826.26	**$9,661.30**
OCFCD	$0.00	$900.00	$8,000.00	$250.00	$6,000.00	**$15,150.00**
TOTALS	**$0.00**	**$7,088.64**	**$63,010.14**	**$1,969.07**	**$47,257.61**	**$119,325.45**

UNFUNDED MANDATES TEST CLAIM
Cost Sharing Summary For Countywide Program/Region Specific Elements
NPDES Santa Ana Permittees
Fiscal Year 2010-11

Permittee	Residential Program	Pub Ed Workshops	Public Education Survey	Public Particpation	LID/WQMP	TOTAL
Anaheim	$3,311.51	$827.88	$0.00	$206.97	$6,209.07	**$10,555.42**
Brea	$545.74	$136.44	$0.00	$34.11	$1,023.26	**$1,739.55**
Buena Park	$755.87	$188.97	$0.00	$47.24	$1,417.26	**$2,409.33**
Costa Mesa	$1,084.63	$271.16	$0.00	$67.79	$2,033.68	**$3,457.26**
Cypress	$458.43	$114.61	$0.00	$28.65	$859.55	**$1,461.24**
Fountain Valley	$572.59	$143.15	$0.00	$35.79	$1,073.61	**$1,825.13**
Fullerton	$1,376.72	$344.18	$0.00	$86.05	$2,581.36	**$4,388.31**
Garden Grove	$1,473.59	$368.40	$0.00	$92.10	$2,762.98	**$4,697.06**
Huntington Beach	$1,866.82	$466.70	$0.00	$116.68	$3,500.29	**$5,950.49**
Irvine	$2,957.06	$739.27	$0.00	$184.82	$5,544.49	**$9,425.64**
La Habra	$553.98	$138.50	$0.00	$34.62	$1,038.72	**$1,765.82**
La Palma	$140.31	$35.08	$0.00	$8.77	$263.08	**$447.23**
Laguna Hills (17.77% in SAR)	$65.13	$16.28	$0.00	$4.07	$122.12	**$207.60**
Laguna Woods (51.97% in SAR)	$100.34	$25.08	$0.00	$6.27	$188.13	**$319.83**
Lake Forest (68.68% in SAR)	$611.80	$152.95	$0.00	$38.24	$1,147.12	**$1,950.10**
Los Alamitos	$122.97	$30.74	$0.00	$7.69	$230.56	**$391.96**
Newport Beach	$1,145.85	$286.46	$0.00	$71.62	$2,148.46	**$3,652.38**
Orange	$1,490.80	$372.70	$0.00	$93.17	$2,795.25	**$4,751.92**
Placentia	$472.06	$118.01	$0.00	$29.50	$885.11	**$1,504.68**
Santa Ana	$2,759.42	$689.86	$0.00	$172.46	$5,173.92	**$8,795.66**
Seal Beach	$254.41	$63.60	$0.00	$15.90	$477.03	**$810.95**
Stanton	$307.73	$76.93	$0.00	$19.23	$576.99	**$980.89**
Tustin	$722.32	$180.58	$0.00	$45.14	$1,354.34	**$2,302.38**
Villa Park	$90.74	$22.69	$0.00	$5.67	$170.14	**$289.24**
Westminster	$799.47	$199.87	$0.00	$49.97	$1,499.01	**$2,548.32**
Yorba Linda	$913.96	$228.49	$0.00	$57.12	$1,713.67	**$2,913.24**
County of Orange (48.15% in SAR)	$2,550.84	$637.71	$0.00	$159.43	$4,782.82	**$8,130.80**
OCFCD	$4,000.00	$1,000.00	$0.00	$250.00	$7,500.00	**$12,750.00**
TOTALS	**$31,505.07**	**$7,876.27**	**$0.00**	**$1,969.07**	**$59,072.01**	**$100,422.41**

EXHIBIT B

PROGRAM IMPLEMENTATION AGREEMENT

AMENDMENT AND RESTATEMENT OF NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM STORMWATER PERMIT IMPLEMENTATION AGREEMENT

This AGREEMENT, for purposes of identification numbered D02-048, entered into this 25th day of June, 2002, by the County of Orange, (herein called the COUNTY), the Orange County Flood Control District (herein called DISTRICT) and the cities of Aliso Viejo, Anaheim, Brea, Buena Park, Costa Mesa, Cypress, Dana Point, Fountain Valley, Fullerton, Garden Grove, Huntington Beach, Irvine, Laguna Beach, Laguna Hills, Laguna Niguel, Laguna Woods Lake Forest, La Habra, La Palma, Los Alamitos, Mission Viejo, Newport Beach, Orange, Placentia, Rancho Santa Margarita, San Clemente, San Juan Capistrano Santa Ana, Seal Beach, Stanton, Tustin, Villa Park, Westminster, and Yorba Linda (herein called CITIES) restates the agreement provisions made previously by the COUNTY, DISTRICT and CITIES with respect to compliance with the National Pollutant Discharge Elimination System (NPDES) municipal stormwater permits issued for Orange County and amends specified provisions to add three additional cities, revises participant share calculations and allows participant share calculations on a countywide and regional basis The COUNTY, DISTRICT and CITIES may be referred to collectively as PERMITTEES or individually as a PERMITTEE in this AGREEMENT

RECITALS

WHEREAS, Congress in 1987 through the Water Quality Act (herein called WQA) amended Section 402 of the Federal Clean Water Act (33 U.S.C.A 1342(p) to require the federal Environmental Protection Agency to promulgate regulations for applications for permits for stormwater discharges; and

WHEREAS, these permit regulations will require the control of pollutants from stormwater discharges by requiring a National Pollutant Discharge Elimination System permit which would allow the lawful discharge of stormwaters into waters of the United States; and

WHEREAS, these EPA regulations require NPDES permits for discharges from municipal storm sewers on a system-wide or jurisdiction-wide basis; and

WHEREAS, the Legislature, in enacting the Orange County Flood Control Act, created the Orange County Flood Control District to provide for the control of flood and storm waters; and

WHEREAS, the powers granted to the DISTRICT include carrying on technical and other investigations, examinations, or tests of all kinds, making measurements, collecting data, and making analyses, studies, and inspections pertaining to water supply, control of floods, use of water, water quality, nuisance, pollution, waste, and contamination of water, both within and without the DISTRICT; and

WHEREAS, the COUNTY, the DISTRICT and the CITIES desire to develop an integrated stormwater discharge management program with the objective of improving water quality in the County of Orange; and

WHEREAS, the California State Water Resources Control Board (CSWRCB) as designee of the EPA has delegated authority to the Regional Water Quality Control Boards-Santa Ana Region (RWQCB-SAR) and San Diego Region (RWQCB-SDR) (collectively, the RWQCBs) for administration of the NPDES stormwater permit application process within the boundaries of their Regions; and

WHEREAS, the COUNTY, DISTRICT and CITIES have been designated as PERMITTEES by the RWQCBs; and

WHEREAS, the COUNTY has been designated as the Principal PERMITTEE on the permits; and

WHEREAS, cooperation between the CITIES, the COUNTY and the DISTRICT to jointly file applications for NPDES Stormwater permits and implement common programs to the extent feasible, is in the best interests of the CITIES, the COUNTY and the District; and

WHEREAS, the COUNTY is willing to share the expertise of its staff with the CITIES so that they can join in seeking and implementing certain requirements of the NPDES Stormwater permits; and

WHEREAS, the PERMITTEES approved a Stormwater Permit Implementation Agreement to memorialize program cooperation based on the above recitals on December 18, 1990 which was subsequently amended on October 26, 1993 by Amendment No 1 (the December 18 1990 Agreement as Amended by Amendment No 1 will be referred to collectively hereinafter as the ORIGINAL AGREEMENT); and

WHEREAS Section X of the ORIGINAL AGREEMENT provided that the ORIGINAL AGREEMENT may be amended by consent of a majority of the PERMITTEES which represent a majority of the percentage contributions as described in Section IV of the ORIGINAL AGREEMENT and

WHEREAS, Section VI of the ORIGINAL AGREEMENT states that any city which becomes signatory to this ORIGINAL AGREEMENT after the applications for the initial NPDES stormwater permits have been approved shall comply with all of the provisions of the ORIGINAL AGREEMENT; and,

WHEREAS pursuant to Sections VI and X of the ORIGINAL AGREEMENT, the PERMITTEES approved Amendment No 1 to the ORIGINAL AGREEMENT (herein called AMENDMENT NO 1) on October 26 1993 to add two newly incorporated cities, provide participant share calculations based on thirty-three PERMITTEES and establish a Technical Advisory Committee; and

WHEREAS, the PERMITTEES now desire to restate those provisions in the ORIGINAL AGREEMENT that remain unchanged and amend specified provisions to add three additional

cities, revise participant share calculations and allow participant share calculations on a countywide and regional basis

NOW THEREFORE: The PERMITTEES hereto do mutually agree to add the cities of Aliso Viejo, Laguna Woods and Rancho Santa Margarita as PERMITTEES under this AGREEMENT, to restate those provisions in the ORIGINAL AGREEMENT that remain unchanged and amend Sections II, III.A., III.B., III.C., IV, VIII, IX, XI and XV in their entirety as follows:

I. FILING STATUS

The COUNTY, DISTRICT and CITIES will file the applications for stormwater permits as PERMITTEES The COUNTY, the DISTRICT and each individual City will be a PERMITTEE.

II. INCORPORATION OF FEDERAL GUIDELINES

The terms of all applicable Federal and State water quality regulations and guidelines under the Clean Water Act and Water Quality Act, as presently written or as changed during the life of this agreement are hereby incorporated by reference and made a part of this AGREEMENT and take precedence over any inconsistent terms of this AGREEEMENT.

III. DELEGATION OF RESPONSIBILITIES

The responsibilities of each of the parties shall be as follows:

A. The COUNTY, on a cost-shared basis, shall administer system compliance by:

1 Preparing implementation and annual operating budgets. The budget year shall coincide with the fiscal year of the COUNTY, July 1 - June 30.

a. The participants shall be permitted to review and approve the annual operating budget and work plan for the forthcoming year. Criteria for approval shall be

affirmative responses from a majority of the PERMITTEES which represent a majority of the percentage contribution as described in Section IV. The COUNTY and the DISTRICT will represent one voting PERMITTEE with their percentage contribution equal to the total of the COUNTY and the DISTRICT as described in Section IV The review period shall be from January 1 to January 31 of each year with approval of the final budget to be completed by February 15.

b. The annual operating budget shall not be exceeded without prior consent of the majority of the PERMITTEES which represent a majority of the percentage contribution.

2 Consulting with the city managers and any committees established by the city managers when preparing budgets and major program elements.

3 Preparing compliance reports to the Regional Board and providing copies to the PERMITTEES

4 Preparing a model system-wide Best Management Practices (BMP) Program report

5 Monitoring the implementation and ensuring the effectiveness of system-wide BMPs. This will include field reconnaissance to evaluate structural and procedural BMPs. An annual report to the RWQCBs will be prepared presenting the results of these evaluations.

6. The COUNTY as Principal PERMITTEE may retain the services of professional consultants and may fund, or contribute to

funding technical and/or economic studies conducted by professional organizations such as the American Public Works Association

B The DISTRICT shall to the maximum extent practicable, and on a cost-shared basis except as set forth in subparagraph 4 below:

1. Perform the water quality and hydrographic monitoring for permit compliance

2 Administer the water pollution control program by enforcing the Orange County Water Quality Ordinance

3 Develop uniform criteria for annual inspection of drainage facilities

4 Perform inspections, at no cost to the CITIES or the COUNTY, on those facilities owned by the DISTRICT and on municipal separate storm sewers in unincorporated County. Contracts for such inspections within CITIES may be undertaken at the sole expense of the requesting city.

C The CITIES shall, to the maximum extent practicable, and at no cost to COUNTY or DISTRICT:

1 Implement a facility inspection program in accordance with the uniform criteria developed by the DISTRICT, for all municipal separate storm sewers as defined by the stormwater permit and within the jurisdictional boundaries of that city

2. Submit to the COUNTY stormwater drain maps with periodic revisions which reflect the modifications that were made to the storm drain system

3 Prepare watershed characterizations, including

a. Zoning designations, and

b Identification of areas where hazardous materials presently are or are suspected to have been stored, manufactured, or disposed. This shall include sites at which a hazardous material spill has occurred.

4. Review, approve, and implement system-wide BMPs

5. Eliminate, or have eliminated, illegal/illicit connections to the storm drain system.

6 Identify the legal authority for control of discharges to the storm drain system.

7. Provide to the COUNTY annual reports (on forms provided by the COUNTY) and any other information needed to satisfy annual reporting requirements of the RWQCBs.

8. Adopt and enforce, or name DISTRICT as enforcer of a water pollution control ordinance, which prohibits non-NPDES permitted discharges to the municipal separate storm sewer system.

D The COUNTY shall, to the maximum extent practicable and at no cost to the CITIES or the DISTRICT, undertake in the unincorporated areas of the COUNTY all activities required above of the CITIES that are not responsibilities of the DISTRICT as outlined in Section III B.

E. The PERMITTEES hereby establish a Technical Advisory Committee (herein called COMMITTEE) consisting of five members chosen by the Orange County City Engineers Association, and one member representing the COUNTY The COMMITTEE shall prepare by-laws for the Technical Advisory Committee and submit same to PERMITTEES for approval The COMMITTEE will act in an advisory role to the

PERMITTEES and implement policy previously established by the PERMITTEES.

IV. PROGRAM COSTS

The responsibilities for payment of all shared costs of equipment, services, contracted analytical services, and the cost of the Regional Board permits, shall be distributed among the COUNTY, DISTRICT, and CITIES as follows:

Participants	Percentage Contribution
DISTRICT	10
CITIES + COUNTY	90

The individual percentage contributions from each city and the COUNTY shall be functions of their respective areas and population relative to those of the entire County Each area shall be calculated as one half of the sum of the area and population fractions, multiplied by 90%. Excluded are national forests, state parks, airports, landfills, oceans, harbors, tidal bays and military installations (Exhibit A-1). The contribution of the COUNTY shall be calculated from unincorporated areas and their respective populations.

Share in percent for City #1 = $\{(X_1/X_{tot}) + (Y_1/Y_{tot})\}/2 \times (90)$

X = area

Y = population

tot = total population or area

90 = total percentage excluding Flood Control District contribution

The percentage share shall be calculated by the COUNTY Public Facilities and Resources Department Environmental Resources Section from population and area data. These calculations shall be completed by January 1 of each year and shall be included in the annual budget proposal The annual budget proposal shall be recomputed for the thirty-six PERMITTEES based on the following percentage share computation methods:

A Countywide costs as provided in Exhibit B-1.

B. Regional costs specific to only one RWQCB permit as provided in Exhibits B-2A and B-2B.

C. In the event of a regulatory directive issued to PERMITTEES, the COUNTY shall provide immediate notice to the affected PERMITTEES and meet and confer with them with respect to responding to the directive and funding the immediate response

Amended calculations and computation method for fiscal year 2002-03 are provided in Exhibits B-1, B-2A and B-2B, which are made a part hereof

If at any time during a given fiscal year the program costs exceed the sum of the deposits, the COUNTY shall submit invoices to the CITIES to recover the deficit, following the approval process described in Section III.A.1.b above The share for each city shall be prorated according to the formula above Each city shall pay the invoice within 45 days of the billing date

The COUNTY shall prepare a fiscal year end accounting within 60 days of the end of the fiscal year. If the fiscal year end accounting results in costs (net of interest earnings) exceeding the sum of the deposits, the

COUNTY shall invoice each city for its prorated share of the excess cost Each city shall pay the billing within 45 days of the date of the invoice. If the fiscal year end accounting results in the sum of the deposits exceeding costs (net of interest earnings), the excess deposits will carry forward to reduce the billings for the following year.

The COUNTY shall invoice each city for its annual deposit at the beginning (July 1 of each fiscal year. Each city shall pay the deposit within 45 days of the date of the invoice. Each city's deposit shall be based on their prorated share of the approved annual budget, reduced for any surplus identified in the prior fiscal year end accounting

Interest earned on the CITIES' deposits will not be paid to the CITIES, but will be credited against the CITIES' share of the program costs.

Upon termination of the program a final accounting shall be performed by the COUNTY If costs (net of interest earnings) exceed the sum of the deposits, the COUNTY shall invoice each city for its prorated share of the excess Each city shall pay the invoice within 45 days of the date of the invoice. If the sum of the deposits exceeds the costs, the COUNTY shall reimburse to each city its prorated share of the excess, within 45 days of the final accounting. Interest earnings are used to offset the CITIES' share of program costs and will not be refunded to the CITIES.

Each city and the COUNTY shall bear the financial responsibility for implementing the Program, within its jurisdictional boundaries, as outlined in Section III. C. and D.

V. LIFE OF THE AGREEMENT

The life of the AGREEMENT shall be indefinite or as long as the WQA mandates compliance

VI. ADDITIONAL PARTIES

Any city which becomes signatory to this AGREEMENT after the applications for the initial NPDES stormwater permits have been approved and any city which becomes incorporated shall become a PERMITTEE on the NPDES stormwater permit issued by its respective RWQCB and shall comply with all of the provisions of this AGREEMENT. The date of initiation, for determining participant costs for newly incorporated CITIES shall be the date of incorporation, and for a city signing after NPDES stormwater permit approval it shall be the date of the initial application for the NPDES Stormwater permit. The costs for adding the additional parties to the program, including additional permit and processing fees, shall be paid by the added party. Monies to be reimbursed to the existing PERMITTEES shall be credited to their respective annual program operating fees for the following budget year.

VII WITHDRAWAL FROM THE AGREEMENT

A participant may withdraw from the AGREEMENT 60 days subsequent to written notice to the COUNTY. The COUNTY will notify the remaining PERMITTEES within 10 business days of receipt of the withdrawal notice The withdrawing participant shall agree to file for a separate permit and to comply with all of the requirements established by the RWQCB(s). In addition, withdrawal shall constitute forfeiture of the withdrawing participant's deposit for the budget year of withdrawal. The withdrawing participant shall be responsible for all lawfully assessed penalties as a

consequence of withdrawal. The cost allocations to the remaining members will be recalculated in the following budget year.

VIII NON-COMPLIANCE WITH PERMIT REQUIREMENTS

Any PERMITTEE found in non-compliance with the conditions of the permit within their jurisdictional responsibilities shall be solely liable for any lawfully assessed penalties, pursuant to Section 13385 of the Water Code and the Federal Clean Water Act Common penalties shall be calculated according to the formula outlined in Section IV.

IX. LEGAL ACTION/ COSTS/ ATTORNEY FEES

Where any legal action is necessary to enforce any provision hereof for damages by reason of an alleged breach of any provisions of this AGREEMENT, the prevailing party shall be entitled to receive from the losing party all litigation and collection expenses, administrative costs, witness fees and court costs including reasonable attorneys fees

X AMENDMENTS TO THE AGREEMENT

This AGREEMENT may be amended by consent of a majority of the PERMITTEES which represent a majority of the percentage contributions as described in Section IV. The COUNTY and the DISTRICT will represent one voting PERMITTEE with a percentage contribution equal to the sum of the individual contributions of the COUNTY and DISTRICT as described in Section IV No amendment to this AGREEMENT shall be effective unless it is in writing and signed by the duly authorized representatives of the majority of PERMITTEES

XI AUTHORIZED SIGNATORIES

The County Director of the Public Facilities and Resources Department and the respective City Managers, shall be authorized to execute the application(s) for NPDES municipal stormwater permit(s) and take all other

procedural steps necessary to file the application(s) for NPDES municipal stormwater permit(s).

XII. NOTICES

All notices shall be deemed duly given if delivered by hand; or three (3) days after deposit in the U.S Mail, postage prepaid

XIII. GOVERNING LAW

This AGREEMENT will be governed and construed in accordance with laws of the State of California If any provision or provisions of this AGREEMENT shall be held to be invalid illegal or unenforceable the validity, legality and enforceability of the remaining provisions shall not any way be affected or impaired hereby

XIV CONSENT TO BREACH NOT WAIVER

No term or provision hereof shall be deemed waived and no breach excused, unless such waiver or consent shall be in writing and signed by the PERMITTEE to have waived or consented. Any consent by any PERMITTEE to, or waiver of, a breach by the other, whether express or implied, shall not constitute a consent to, waiver of or excuse for any other different or subsequent breach.

XV APPLICABILITY OF PRIOR AGREEMENTS

This document restates and amends the provisions in prior agreements and constitutes the entire AGREEMENT between the PERMITTEES with respect to the subject matter; all prior agreements, representations, statements, negotiations and undertakings are superseded hereby

XVI EXECUTION OF THE AGREEMENT

This AGREEMENT may be executed in counterparts and the signed counterparts shall constitute a single instrument.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the dates opposite their respective signatures:

ORANGE COUNTY FLOOD CONTROL DISTRICT
A body corporate and politic

By Cynthia P. Coad
Chairman of the Board of Supervisors

COUNTY OF ORANGE
A body corporate and politic

Date 06-25-02

By Cynthia P. Coad
Chairman of the Board of Supervisors

SIGNED AND CERTIFIED THAT A COPY OF THIS AGREEMENT HAS BEEN DELIVERED TO THE CHAIRMAN OF THE BOARD

Date: 06-25-02

By Robin Stieler Jon
DARLENE J. BLOOM 6/25/02
Clerk of the Board of Supervisors of
Orange County, California

APPROVED AS TO FORM
COUNTY COUNSEL
ORANGE COUNTY, CALIFORNIA

By
Geoffrey K. Hunt, Deputy

Date: 6/12

///

///

///

CITY OF ANAHEIM

Date: 6-18-02, 2002

By: Tom Daly
Mayor

ATTEST:

Sheryll Schroeder
City Clerk

APPROVED AS TO FORM:
JACK L. WHITE, CITY ATTORNEY

A Katt

By: ALISON M. KOTT, DEPUTY CITY ATTORNEY

CITY OF BREA

Date: 6/19, 2002

By: _____
Mayor

ATTEST

_____
City Clerk

APPROVED AS TO FORM:

_____
City

CITY OF BUENA PARK

Date: June 25, 2002

By: _____
Mayor

ATTEST:

_____
City Clerk

APPROVED AS TO FORM

_____
City Attorney

CITY OF COSTA MESA

Date: June 18, 2002

By: Hal W. Dixon
Mayor

ATTEST:

Kitty Delaney, Acting
City Clerk

APPROVED AS TO FORM:

Linda Nguyen, DCA for
City Attorney

Deputy

CITY OF CYPRESS

Date: July 10, 2002

By: Lynda Smith
Mayor

ATTEST:

Jill R. Ingram-Guerstin
City Clerk

APPROVED AS TO FORM:

W. Wyatt
City Attorney

CITY OF DANA POINT

Date: June 25, 2002

By: Joe Snyder
Mayor

ATTEST:

Cathy Cattett
City Clerk

APPROVED AS TO FORM:

City Attorney

CITY OF FOUNTAIN VALLEY

Date: June 4, 2002

By: Dawsann Cook
Mayor

ATTEST:

Jane Irvin
City Clerk - Deputy

APPROVED AS TO FORM:

Alan Burns
City Attorney

CITY OF FULLERTON

Date: June 19, 2002

By: _____
Mayor

ATTEST:

_____
City Clerk

APPROVED AS TO FORM:

_____
City Attorney

APPROVED AS TO CONTENT:

_____
Director of Engineering

CITY OF GARDEN GROVE

Date: June 24, 2002

By: _____
Mayor

ATTEST

_____
City Clerk

APPROVED AS TO FORM:

_____
City Attorney

CITY OF HUNTINGTON BEACH

Date: June 21, 2002

By: Debbie Cook
Mayor

ATTEST:

Connie Brockway
City Clerk 6/24/02

APPROVED AS TO FORM

P.L. Gilbert 6-7-02
for City Attorney
6-6-02

CITY OF IRVINE

Date: June 27 2002, 2002

By: _____
Mayor

ATTEST:

_____
City Clerk

APPROVED AS TO FORM:

_____
City Attorney

CITY OF LA HABRA

Date: 6-17, 2002

BY: _____
Mayor / Pro Tem

ATTEST:

_____
City Clerk

APPROVED AS TO FORM:

_____
City Attorney

CITY OF LA PALMA

Date: 7/8, 2002

By:

ATTEST:

~~City Clerk~~
Deputy City Clerk

APPROVED AS TO FORM:

City Attorney

CITY OF LAGUNA BEACH

Date: 7/16 2002

By: Kenneth Frank
City Manager

ATTEST:

Verna L. Rollinger
City Clerk

APPROVED AS TO FORM:

City Attorney

CITY OF LAGUNA BEACH INCORPORATED JUNE 29, 1927 ORANGE COUNTY, CALIFORNIA

CITY OF LAGUNA HILLS

Date: June 11, 2002

By: _____
Mayor R. Craig Scott

ATTEST:

_____
City Clerk Mary A. Carlson

APPROVED AS TO FORM:

_____
City Attorney Lois E. Jeffrey

CITY OF LAGUNA NIGUEL

Date: June 24, 2002

By: _____
Mayor

ATTEST:

_____
City Clerk

APPROVED AS TO FORM:

_____
City Attorney

6/20/02

CITY OF LAGUNA WOODS

Date: 6-20-02, 2002

By: _____
Mayor

ATTEST:

Clerk

APPROVED AS TO FORM:

_____
City Attorney

CITY OF LAKE FOREST

Date: _____, 2002

By: _____
Richard T. Dixon, Mayor

ATTEST:

_____
Sherry A.F. Hentz, City Clerk

APPROVED AS TO FORM:

_____
Thomas W. Allen, City Attorney

CITY OF LOS ALAMITOS

Date: June 24, 2002

By: _____
Mayor Ronald Bates

ATTEST:

_____
City Clerk C. D. Cordova

APPROVED AS TO FORM:

_____
City Attorney Fred Galante

CITY OF MISSION VIEJO

Date: 7-2-02, 2002

By: _____
Mayor

ATTEST:

_____
City Clerk

APPROVED AS TO FORM:

_____
City Attorney

CITY OF NEWPORT BEACH

Date: June 25, 2002

By: Tod Ridgeway
Mayor

ATTEST:

LaVonne M. Harkless
City Clerk

APPROVED AS TO FORM:

City Attorney

CITY OF ORANGE

Date: _____, 2002

By: _____
Mayor

ATTEST:

City Clerk

APPROVED AS TO FORM:

_____
Attorney

CITY OF PLACENTIA

Date: June 18, 2002

By: _____
Mayor

ATTEST:

_____
City Clerk

APPROVED AS TO FORM:

_____
City Attorney

CITY OF RANCHO SANTA MARGARITA

Date: June 20, 2002

By: _____
Mayor James M. Ihor

ATTEST:

_____
City Clerk Debbie Zinn

APPROVED AS TO FORM:

_____
City Attorney John E. Cavanaugh

CITY OF SAN CLEMENTE

Date: JUNE 19, 2002

By: _____
Mayor

ATTEST:

_____
City Clerk

APPROVED AS TO FORMS

/s/ Jeff Oderman
City Attorney

CITY OF SAN JUAN CAPISTRANO

Date: _____, 2002

By: _____
Mayor

ATTEST:

_____
City Clerk

APPROVED AS TO FORM:

_____
City Attorney

CITY OF SANTA ANA

Date: July 1, 2002

By: [signature]
Mayor

ATTEST:

[signature]
City Clerk

APPROVED AS TO FORM:

[signature]
City Attorney

CITY OF SEAL BEACH

Date: June 24, 2002

By: David Lesser
Mayor

ATTEST:

City Clerk

APPROVED AS TO FORM:

City Attorney

CITY OF STANTON

Date: June 25, 2002

By: _____
Mayor

ATTEST:

_____
City Clerk

APPROVED AS TO FORM:

_____
City Attorney

CITY OF TUSTIN

Date: 7-1-02, 2002

By: _____
Mayor

ATTEST

_____
City Clerk

APPROVED AS TO FORM:

_____
City Attorney

CITY OF VILLA PARK

Date: June 27, 2002 2002

By: _____
Mayor

ATTEST:

_____
City Clerk

APPROVED AS TO FORM:

_____
City Attorney

CITY OF WESTMINSTER

Date: June 24, 2002

By: Margaret L. Rice
Mayor

ATTEST:

Marian Contreras
City Clerk

APPROVED AS TO FORM:

City Attorney

CITY OF YORBA LINDA

By: _____
Mayor Allen Castellano

Date: June 18, 2002

APPROVED AS TO FORM:

ATTEST:

_____
City Clerk

_____
City Attorney
Best, Best & Krieger, LLP

EXHIBIT

LAND AREA DEDUCTED FROM JURISDICTIONS

Landfills	Area sq miles	Jurisdiction
Olinda	0.89	County
Santiago	0.25	County
Prima Descheca	2.34	County
Bee Canyon	1.13	County
Coyote Canyon	1.09	County
State Parks		
Alamitos State Beach	0.002	Seal Beach
Bolsa Chica State Beach	0.27	Huntington Beach
Chino Hills State Park	4.09	County
Corona Del Mar State Beach	0.05	Newport Beach
Crystal Cove State Park	6.30	County
Doheney State Beach	0.40	Dana Point
Huntington State Beach	0.20	Huntington Beach
San Clemente State Beach	0.18	San Clemente
Airports		
Fullerton	0.11	Fullerton
John Wayne	0.78	County
Military facilities		
MCAS Tustin	2.40	Tustin
MCAS El Toro	6.25	County
Los Alamitos Armed Svs. Center	2.07	Los Alamitos
Seal Beach Weapons Station	2.17	Seal Beach
National Forests		
Cleveland National Forest	86.75	County

EXHIBIT B - 1
Cost Sharing For Region Specific Elements
NPDES Permittee Shares of Revenue
Fiscal Year 2002/2003

Permittee	Population *	Area (sq. mi.) **	Weighted Average Share of Revenue (%)	Budget Share FY 2002-2003
Aliso Viejo***	40,166	7.15	1.168548686	$70,114
Anaheim	336,300	49.761	9.005630974	$540,344
Brea	36,100	10.954	1.399038534	$83,943
Buena Park	80,100	10.064	2.007224432	$120,435
Costa Mesa	110,900	15.480	2.898146677	$173,891
Cypress	47,150	6.925	1.258634332	$75,519
Dana Point	35,800	6.440	1.046705013	$62,803
Fountain Valley	55,900	9.553	1.595652357	$95,740
Fullerton	129,200	22.536	3.723143526	$223,391
Garden Grove	169,200	17.900	3.981247954	$238,877
Huntington Beach	193,700	27.283	5.080856025	$304,855
Irvine	150,100	46.148	5.863460245	$351,811
La Habra	60,800	7.313	1.498466857	$89,909
La Palma	15,700	2.014	0.396615551	$23,797
Laguna Beach	24,150	7.820	0.973824935	$58,430
Laguna Hills	33,900	6.626	1.031809811	$61,909
Laguna Niguel	63,200	15.003	2.127750971	$127,656
Laguna Woods***	16,750	3.050	0.492569562	$29,554
Lake Forest	76,700	16.795	2.473428382	$148,407
Los Alamitos	11,750	4.256	0.508566627	$30,514
Mission Viejo	96,600	17.427	2.828184924	$169,693
Newport Beach	72,000	27.740	3.244247595	$194,657
Orange	132,800	23.329	3.839599305	$230,378
Placentia	47,600	6.606	1.240982586	$74,460
Rancho Santa Margarita***	48,350	13.080	1.751218729	$105,074
San Clemente	52,500	17.697	2.170701556	$130,243
San Juan Capistrano	34,600	14.054	1.614764803	$96,887
Santa Ana	348,100	27.349	7.460695499	$447,646
Seal Beach	24,500	10.660	1.197977061	$71,879
Stanton	38,300	3.131	0.830259739	$49,816
Tustin	69,200	10.992	1.911061605	$114,665
Villa Park	6,125	2.068	0.255047196	$15,303
Westminster	89,900	10.190	2.167659672	$130,061
Yorba Linda	60,000	19.918	2.45714216	$147,430
County of Orange	117,634	86.846	8.499136117	$509,953
OCFCD	0	0.000	10	$600,006
TOTALS	**2,925,775**	**584.178**	**100.00000**	**$6,000,063**

* Source: State of California, Department of Finance, *E-1 City/County Population Estimates with Annual Percent Change January 1, 2000 and 2001*, Sacramento, California, May 2001.

** Source: Public Facilities and Resources Department - Geomatics. Area was calculated in miles using the dry land area figures and subtracting areas in each jurisdiction for national forests, state parks, airports, landfills and military installations as determined in the NPDES Implementation Agreement.

*** Source: County of Orange will cover the program costs until the cities are added onto the Implementation Agreement.

SECTION 6 –

DECLARATIONS

IN SUPPORT OF JOINT TEST CLAIMS IN RE SANTA ANA RWQCB

ORDER NO. R8-2009-0030

(NPDES NO. CAS618030)

County of Orange and Orange County Flood Control District
City of Anaheim
City of Brea
City of Buena Park
City of Costa Mesa
City of Cypress
City of Fountain Valley
City of Fullerton
City of Huntington Beach
City of Irvine
City of Lake Forest
City of Newport Beach
City of Placentia
City of Seal Beach
City of Villa Park

DECLARATION OF JESS CARBAJAL

FOR

COUNTY OF ORANGE

AND

ORANGE COUNTY FLOOD CONTROL DISTRICT

DECLARATION OF JESS CARBAJAL ON BEHALF OF THE COUNTY OF ORANGE IN SUPPORT OF TEST CLAIM

I, Jess Carbajal, declare as follows:

1. I make this declaration based upon my own personal knowledge, except for matters set forth herein on information and belief, and as to those matters I believe them to be true, and if called upon to testify, I could and would competently testify to the matters set forth herein under oath.

2. I am employed by the County of Orange/Orange County Flood Control District (hereinafter referred to as the "County") as the Director of Public Works.

3. I have held my current position for approximately seven months. My duties include managing the OC Public Works Department and I oversee divisional supervisors in OC Engineering, OC Planning, OC Facilities, and Administration.

4. I have reviewed the California Regional Water Quality Control Board Santa Ana Region ("RWQCB"), Order No. R8-2009-0030 (NPDES No. CAS618030) issued by the Santa Ana RWQCB on May 22, 2009 (the "2009 Permit") and am familiar with the requirements of the Permit as it applies to the County.

5. I have also reviewed and I am familiar with the requirements of the Order No. R8-2002-0010 (NPDES CAS618030)

issued by the Santa Ana RWQCB on January 18, 2002 (the "2002 Permit").

6. Based on my understanding of the requirements of the 2002 Permit and the requirements of the 2009 Permit, I believe the 2009 Permit requires the Permittees to perform the following new activities, among others, that are not required by the 2002 Permit, and which are unique to local governmental entities:

(a) Municipal Inventories: Sections IX.1 and X of the 2009 Permit require the Permittee to maintain an inventory of industrial and commercial facilities/businesses within its jurisdiction, which must be maintained in a computer-based database system. Inclusion of a Geographical Information System (GIS) is required, with latitude/longitude (in decimals) or NAD83/WGS8439 compatible formatting. The cost to create, upgrade and/or maintain GIS capability to implement this mandated activity is in excess of $1,000. The costs of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(b) Residential Program

(i) Common Interest Area (CIA)/Homeowner Association (HOA) Pilot Program: Subsection XI.4 of the 2009 Permit requires the Permittees to develop a pilot program to control pollutant discharges from common interest areas and areas managed by homeowner associations or management companies. Program activities to be funded include:

evaluation of applicable regional programs and studies to encourage efficient water use and to minimize runoff, such as those developed by the Municipal Water District of Orange County (MWDOC) and the Irvine Ranch Water District (IRWD) and development of a pilot program to include design and dissemination of educational and outreach materials, determination of baseline conditions and measurable target outcomes, and assessment of performance. The Permittees will collectively retain a consultant to perform this mandated activity in FY 2010-11. The cost of developing the pilot HOA program is estimated to be $40,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The County's proportional share of the budgeted costs for complying with the mandated activities in FY 2010-11 is detailed in the enclosed Permittee cost-share summary.

(c) Public Education and Outreach

(i) Public Awareness Survey: Subsection XIII.1 of the 2009 Permit requires the Permittees to complete a public awareness survey to determine the effectiveness of the current public and business education strategy and any need for changes to the current multimedia public education efforts. The Permittees collectively retained a consultant to perform this mandated activity in FY 2009-10. The cost of developing and conducting this survey and analyzing the results for the city stakeholders was $80,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The

County's proportional share of the budgeted costs for complying with the mandated activities in FY 2009-10 is detailed in the enclosed Permittee cost-share summary.

(ii) Workshops: Subsection XIII.4 of the 2009 Permit requires the Permittees to conduct sector-specific workshops, individually or on a regional basis by July 1, 2010 and on an annual basis thereafter. The target sectors include manufacturing facilities; mobile service industry; commercial, distribution and retail sales industry; residential/commercial landscape construction and services industry; residential and commercial construction industry; and residential and community activities. The Permittees collectively retained County staff to assist with these mandated activities. The cost of the workshops in FY 2009-10 was $9,000. The cost of the workshops in FY 2010-11 is estimated to be $10,000. The costs of this new program will continue into the future throughout the 2009 Permit and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit. Each Permittee's share of these mandated costs is based on a formula set forth in the enclosed Implementation Agreement. The County's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed Permittee cost-share summary. There will be additional costs incurred by the County in excess of $1,000 to cover staff attendance at the workshops and other related program participation.

(iii) Public Participation: Subsection XIII.7 of the 2009 Permit requires the Permittees to develop and implement a mechanism for public participation in the updating and implementation of the Drainage Area Management Plans, monitoring plans, Water Quality Management Plan guidance and Fact Sheets for various activities. The public shall be informed of the availability of these documents through public notices in local newspapers, County and/or city websites, local libraries/city halls and/or courthouses. The Permittees collectively retained County staff to assist with these mandated activities. The cost to develop and implement a stakeholder advisory process in FY 2009-10 was approximately $2,500 and is expected to be $2,500 in FY 2010-11. The costs of this new program will continue into the future throughout the 2009 Permit to continue to notify the public of new program developments and documents. Each Permittee's share of these mandated costs is based on a formula set forth in the enclosed Implementation Agreement. The County's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed Permittee cost-share summary. There will be additional costs incurred by the County in excess of $1,000 to cover staff attendance at stakeholder meetings and other related program participation.

(d) New/Revised Development Programs and Standards

(i) Low Impact Development (LID) and the Model Water Quality Management Plan (WQMP): Subsection XII.C of the 2009 Permit

requires the Permittees to incorporate LID principals and structural features into Public Agency Priority Development Projects and in other instances incorporate United States Environmental Protection Agency (US EPA) Guidance entitled, *"Managing Wet Weather with Green Infrastructure: Green Streets."* These include certain road, drainage facility, public utility, linear, and other projects which have constraints that, in some cases, prevent compliance. The Permittees collectively retained a consultant team to assist with developing a public agency project element within the Model WQMP in FY 2009-10. The cost of this work in FY 2009-10 was $60,000, and continuation of this work in FY 2010-11 is approximated to be $75,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The County's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed Permittee cost-share summary. The cost to develop public agency WQMPs for road, drainage facility, public utility, linear, and other projects with incorporation of LID principals to implement this mandated activity is in excess of $1,000. The costs of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(ii) Hydrologic Conditions of Concern ("HCOC"): Subsection XII.D of the 2009 Permit requires the Permittees to address the impact of urbanization on downstream hydrology. Subsection XII.D.1 requires each Priority Development Project to ascertain the impact of the development on the site's hydrologic regime based on the two-year frequency storm event and include the findings in the WQMP. The cost to assess HCOCs for public agency projects to comply with this mandated activity is in excess of $1,000. The cost of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(e) Total Maximum Daily Loads (TMDLs): Section XVIII of the 2009 Permit contains several new programs involving what are known as "Total Maximum Daily Loads" or "TMDLs" as follows:

(i) Permit Subsections XVIII.B.1 through B.4 requires compliance with a series of new numeric effluent limits based on waste load allocations within EPA-promulgated Toxic Pollutant TMDLs for San Diego Creek and Newport Bay. These new program requirements all involve the imposition of numeric effluent limits from waste load allocations from these TMDLs, as set forth in Tables 1 A/B/C, Table 2 A/B/C/D and Table 3 on pages 68 to 71 of the 2009 Permit. The costs to comply with each of these TMDL-related programs are in excess of $1,000.

(ii) Permit Subsection XVIII.B.5 imposes new TMDL-related requirements that will take effect upon adoption by State Board and the Office of Administrative Law ("OAL"), and concern compliance with numeric limits taken from wasteload allocations contained in the Regional Board adopted TMDLs for Organochlorine Compounds for Newport Bay and San Diego Creek (as set forth in Table 4 on page 71 of the 2009 Permit). Once in effect, the costs to comply with these new TMDL-related requirements will be in excess of $1,000.

(iii) Permit Subsection XVIII.B.7 imposes new requirements on the Permittees to participate in the development and implementation of additional Metals and Selenium TMDLs for the Newport Bay Watershed being developed by the Regional Board. The costs of these new TMDL-related programs will be in excess of $1,000.

(iv) Permit Subsection XVIII.B.8 imposes new requirements concerning the preparation of a Cooperative Watershed Program for Selenium TMDL for Newport Bay Watershed. The Cooperative Watershed Program must be submitted within 24 months of the date of adoption of the 2009 Permit or one month after the approval of the Selenium TMDL by the Office of Administrative Law. The costs of this new TMDL-related program will be in excess of $1,000.

(v) Permit Subsection XVIII.B.8 requires that, once the Cooperative Watershed Program for Selenium TMDL for Newport Bay Watershed has been prepared and approved, that the Permittees must then

implement this Program. The cost to implement this new TMDL-related, *i.e.*, to implement the Cooperative Watershed Program, will be in excess of $1,000.

(vi) Permit Subsection XVIII.B.9 requires the development and implementation of a Constituent Specific Source Control Plan (including a monitoring program) in connection with a Metals TMDL for Coyote Creek and San Gabriel River. The Constituent Specific Source Control Plan is required to be designed and implemented to ensure compliance with specific numeric effluent limits taken from the wasteload allocations set forth the Metals TMDL for Coyote Creek and San Gabriel River, as set forth in Table 6 on page 73 of the 2009 Permit. The costs to comply with this new TMDL-related program will be in excess of $1,000.

(vii) Permit Subsection XVIII.C.1 impose new numeric effluent limits based on wasteload allocations from a Fecal Coliform/Bacteria TMDL for Newport Bay and San Diego Creek, as set forth in Tables 8A and 8B on pages 74-75 of the 2009 Permit. The costs to comply with this new TMDL-related program will be in excess of $1,000.

(viii) Permit Subsection XVIII.D.1 requires compliance with numeric effluent limits from waste load allocations from a TMDL for Diazinon and Chlorpyrifos for San Diego Creek and Chlorpyrifos for Newport Bay, as set forth in Tables 9A and 9B on page 76 of the 2009 Permit. The costs to comply with these new TMDL-related programs will be in excess of $1,000.

None of these TMDL-related programs are programs that were required as a part of the 2002 Permit and thus all are new programs under the 2009 Permit. The costs to be incurred by the Permittees for these various TMDL-related programs, as written into the 2009 Permit, collectively will be in the tens of millions of dollars and potentially in excess of one hundred million dollars. Unless modified, each of these TMDL-related programs will continue throughout the life of the 2009 Permit, and indefinitely into the future as these TMDL programs will be carried forward into future iterations of the Municipal Permits.

7. I am informed and believe that there are no dedicated State, federal or regional funds that are or will be available to pay for any of these new programs/activities. I am not aware of any fee or tax which the County would have the discretion to impose under California law, to recover any portion of these new programs/activities. I further am informed and believe that the only available source to pay for these new programs/activities are and will be the County's General Fund.

Executed this 28th day of June, 2010 at Santa Ana, California.

I declare under penalty of perjury that the foregoing is true and correct.

Jess A. Carbajal
Director of Public Works, County of Orange

DECLARATION OF KEITH LINKER FOR THE CITY OF ANAHEIM

DECLARATION OF KEITH LINKER ON BEHALF OF THE CITY OF ANAHEIM IN SUPPORT OF TEST CLAIM

I, Keith Linker, declare as follows:

1. I make this declaration based upon my own personal knowledge, except for matters set forth herein on information and belief, and as to those matters I believe them to be true, and if called upon to testify, I could and would competently testify to the matters set forth herein under oath.

2. I am employed by the City of Anaheim (hereafter, "City") as a Principal Civil Engineer.

3. I have held my current position for approximately nine years. My duties include addressing the City's stormwater and related environmental programs as they affect the Public Works and capital improvements in to a degree the City in general.

4. I have reviewed the California Regional Water Quality Control Board Santa Ana Region ("RWQCB"), Order No. R8-2009-0030 (NPDES No. CAS618030) issued by the Santa Ana RWQCB on May 22, 2009 (the "2009 Permit") and am familiar with the requirements of the Permit as it applies to the City.

5. I have also reviewed and am familiar with the requirements of the Order No. R8-2002-0010 (NPDES CAS618030) issued by the Santa Ana RWQCB on January 18, 2002 (the "2002 Permit").

6. Based on my understanding of the requirements of the 2002 Permit and the requirements of the 2009 Permit, I believe the 2009 Permit requires the Permittees to perform the following new activities, among others, that are not required by the 2002 Permit, and which are unique to local governmental entities:

(a) Municipal Inventories: Sections IX.1 and X of the 2009 Permit require the Permittee to maintain an inventory of industrial and commercial facilities/businesses within its jurisdiction, which must be maintained in a computer-based database system. Inclusion of a Geographical Information System (GIS) is required, with latitude/longitude (in decimals) or NAD83/WGS8439 compatible formatting. The cost to create, upgrade and/or maintain GIS capability to implement this mandated activity is in excess of $1,000. For Fiscal Year (FY) 2009-10, the approximate cost for this program is $30,000.00. For FY 2010-11, the approximate cost for this program is $5,000.00. The costs of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(b) Residential Program

(i) Common Interest Area (CIA)/Homeowner Association (HOA) Pilot Program: Subsection XI.4 of the 2009 Permit requires the Permittees to develop a pilot program to control pollutant discharges from common interest areas and areas managed by homeowner associations or management companies. Program activities to be funded include:

evaluation of applicable regional programs and studies to encourage efficient water use and to minimize runoff, such as those developed by the Municipal Water District of Orange County (MWDOC) and the Irvine Ranch Water District (IRWD) and development of a pilot program to include design and dissemination of educational and outreach materials, determination of baseline conditions and measurable target outcomes, and assessment of performance. The Permittees will collectively retain a consultant to perform this mandated activity in FY 2010-11. The cost of developing the pilot HOA program is estimated to be $40,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with the mandated activities in FY 2010-11 is detailed in the enclosed city cost-share summary.

(c) Public Education and Outreach

(i) Public Awareness Survey: Subsection XIII.1 of the 2009 Permit requires the Permittees to complete a public awareness survey to determine the effectiveness of the current public and business education strategy and any need for changes to the current multimedia public education efforts. The Permittees collectively retained a consultant to perform this mandated activity in FY 2009-10. The cost of developing and conducting this survey and analyzing the results for the city stakeholders was $80,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The City's

proportional share of the budgeted costs for complying with the mandated activities in FY 2009-10 is detailed in the enclosed city cost-share summary.

(ii) Workshops: Subsection XIII.4 of the 2009 Permit requires the Permittees to conduct sector-specific workshops, individually or on a regional basis by July 1, 2010 and on an annual basis thereafter. The target sectors include manufacturing facilities; mobile service industry; commercial, distribution and retail sales industry; residential/commercial landscape construction and services industry; residential and commercial construction industry; and residential and community activities. The Permittees collectively retained County staff to assist with these mandated activities. The cost of the workshops in FY 2009-10 was $9,000. The cost of the workshops in FY 2010-11 is estimated to be $10,000. The costs of this new program will continue into the future throughout the 2009 Permit and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit. Each Permittee's share of these mandated costs is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. There will be additional costs incurred by the City in excess of $1,000 to cover staff attendance at the workshops and other related program participation.

(iii) Public Participation: Subsection XIII.7 of the 2009 Permit requires the Permittees to develop and implement a mechanism for public participation in the updating and implementation of the Drainage Area Management Plans, monitoring plans, Water Quality Management Plan guidance and Fact Sheets for various activities. The public shall be informed of the availability of these documents through public notices in local newspapers, County and/or city websites, local libraries/city halls and/or courthouses. The Permittees collectively retained County staff to assist with these mandated activities. The cost to develop and implement a stakeholder advisory process in FY 2009-10 was approximately $2,500 and is expected to be $2,500 in FY 2010-11. The costs of this new program will continue into the future throughout the 2009 Permit to continue to notify the public of new program developments and documents. Each Permittee's share of these mandated costs is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. There will be additional costs incurred by the City in excess of $1,000 to cover staff attendance at stakeholder meetings and other related program participation.

(d) New/Revised Development Programs and Standards

(i) Low Impact Development (LID) and the Model Water Quality Management Plan (WQMP): Subsection XII.C of the 2009 Permit

requires the Permittees to incorporate LID principals and structural features into Public Agency Priority Development Projects and in other instances incorporate United States Environmental Protection Agency (US EPA) Guidance entitled, *"Managing Wet Weather with Green Infrastructure: Green Streets."* These include certain road, drainage facility, public utility, linear, and other projects which have constraints that, in some cases, prevent compliance. The Permittees collectively retained a consultant team to assist with developing a public agency project element within the Model WQMP in FY 2009-10. The cost of this work in FY 2009-10 was $60,000, and continuation of this work in FY 2010-11 is approximated to be $75,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. The cost to develop public agency WQMPs for road, drainage facility, public utility, linear, and other projects with incorporation of LID principals to implement this mandated activity is in excess of $1,000. For FY 2009-10, the approximate cost for this program is in excess of $7,500 For FY 2010-11, the approximate cost for this program is in excess of $200,000 The costs of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this

program will likely be carried forward into all future iterations of the Permit.

(ii) Hydrologic Conditions of Concern ("HCOC"): Subsection XII.D of the 2009 Permit requires the Permittees to address the impact of urbanization on downstream hydrology. Subsection XII.D.1 requires each Priority Development Project to ascertain the impact of the development on the site's hydrologic regime based on the two-year frequency storm event and include the findings in the WQMP. The cost to assess HCOCs for public agency projects to comply with this mandated activity is in excess of $1,000. The cost of this new mandated activity for FY 10-11 will likely be in excess of $30,000 and continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(e) Total Maximum Daily Loads (TMDLs): Section XVIII of the 2009 Permit contains a new program involving what is known as "Total Maximum Daily Loads" or "TMDLs" as follows:

(i) Permit Subsection XVIII.B.9 requires the development and implementation of a Constituent Specific Source Control Plan (including a monitoring program) in connection with a Metals TMDL for Coyote Creek and San Gabriel River. The Constituent Specific Source Control Plan is required to be designed and implemented to ensure compliance with specific numeric effluent limits taken from the wasteload allocations set forth the Metals TMDL for Coyote Creek and San Gabriel River, as set

forth in Table 6 on page 73 of the 2009 Permit. The costs to comply with this new TMDL-related program will be in excess of $1,000.

This TMDL-related program was not required as a part of the 2002 Permit and thus is a new program under the 2009 Permit. Unless modified, this TMDL-related program will continue throughout the life of the 2009 Permit, and indefinitely into the future as this TMDL program will be carried forward into future iterations of the Municipal Permits.

7. I am informed and believe that there are no dedicated State, federal or regional funds that are or will be available to pay for any of these new programs/activities. I am not aware of any fee or tax which the City would have the discretion to impose under California law, to recover any portion of these new programs/activities. I further am informed and believe that the only available source to pay for these new programs/ activities are and will be the City's General Fund.

Executed this 23rd day of June, 2010 at Anaheim, California. I declare under penalty of perjury that the foregoing is true and correct.

KEITH LINKER
PRINCIPAL CIVIL ENGINEER

DECLARATION OF CHARLIE VIEW FOR THE CITY OF BREA.

DECLARATION OF CHARLIE VIEW ON BEHALF OF THE CITY OF BREA IN SUPPORT OF TEST CLAIM

I, Charlie View, declare as follows:

1. I make this declaration based upon my own personal knowledge, except for matters set forth herein on information and belief, and as to those matters I believe them to be true, and if called upon to testify, I could and would competently testify to the matters set forth herein under oath.

2. I am currently employed by the City of Brea (hereafter, "City") as the Director of Public Works with direct knowledge of the program and associated costs.

3. I have held my current position for six months. However, I have worked with the City for a total of eight consecutive years. My current duties include managing the Public Works Department, and I oversee divisional supervisors in Engineering, Water, Buildings, Streets/Sewer, and Parks. Prior to holding my current position as Director of Public Works, when I served as Director of Development Services, I managed division supervisors in Engineering, Planning and Building & Safety.

4. I have reviewed the California Regional Water Quality Control Board Santa Ana Region ("RWQCB"), Order No. R8-2009-0030 (NPDES No. CAS618030) issued by the Santa Ana RWQCB on May 22, 2009 (the "2009 Permit") and am familiar with the requirements of the Permit as it applies to the City.

5. I have also reviewed and I am familiar with the requirements of the Order No. R8-2002-0010 (NPDES CAS618030) issued by the Santa Ana RWQCB on January 18, 2002 (the "2002 Permit").

6. Based on my understanding of the requirements of the 2002 Permit and the requirements of the 2009 Permit, I believe the 2009 Permit requires the Permittees to perform the following new activities, among others, that are not required by the 2002 Permit, and which are unique to local governmental entities:

(a) Municipal Inventories: Sections IX.1 and X of the 2009 Permit require the Permittee to maintain an inventory of industrial and commercial facilities/businesses within its jurisdiction, which must be maintained in a computer-based database system. Inclusion of a Geographical Information System (GIS) is required, with latitude/longitude (in decimals) or NAD83/WGS8439 compatible formatting. The cost to create, upgrade and/or maintain GIS capability to implement this mandated activity is in excess of $1,000. For Fiscal Year (FY) 2009-10, the approximate cost for this program is $6,000. For FY 2010-11, the approximate cost for this program is $7,100. The costs of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(b) Residential Program

(i) Common Interest Area (CIA)/Homeowner Association (HOA) Pilot Program: Subsection XI.4 of the 2009 Permit requires the Permittees to develop a pilot program to control pollutant discharges from common interest areas and areas managed by homeowner associations or management companies.

Program activities to be funded include: evaluation of applicable regional programs and studies to encourage efficient water use and to minimize runoff, such as those developed by the Municipal Water District of Orange County (MWDOC) and the Irvine Ranch Water District (IRWD) and development of a pilot program to include design and dissemination of educational and outreach materials, determination of baseline conditions and measurable target outcomes, and assessment of performance. The Permittees will collectively retain a consultant to perform this mandated activity in FY 2010-11. The cost of developing the pilot HOA program is estimated to be $40,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with the mandated activities in FY 2010-11 is detailed in the enclosed city cost-share summary.

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mandated activities in FY 2009-10 is detailed in the enclosed city cost-share summary.

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(iii) Public Participation: Subsection XIII.7 of the 2009 Permit requires the Permittees to develop and implement a mechanism for public participation in the updating and implementation of the Drainage Area Management Plans,

monitoring plans, Water Quality Management Plan guidance and Fact Sheets for various activities. The public shall be informed of the availability of these documents through public notices in local newspapers, County and/or city websites, local libraries/city halls and/or courthouses. The Permittees collectively retained County staff to assist with these mandated activities. The cost to develop and implement a stakeholder advisory process in FY 2009-10 was approximately $2,500 and is expected to be $2,500 in FY 2010-11. The costs of this new program will continue into the future throughout the 2009 Permit to continue to notify the public of new program developments and documents. Each Permittee's share of these mandated costs is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. There will be additional costs incurred by the City in excess of $1,000 to cover staff attendance at stakeholder meetings and other related program participation.

(d) New/Revised Development Programs and Standards

(i) Low Impact Development (LID) and the Model Water Quality Management Plan (WQMP): Subsection XII.C of the 2009 Permit requires the Permittees to incorporate LID principals and structural features into Public Agency Priority Development Projects and in other instances incorporate United States Environmental Protection Agency (US EPA) Guidance entitled, *"Managing Wet Weather with Green Infrastructure: Green Streets."* These include certain road, drainage facility, public utility, linear, and other projects

which have constraints that, in some cases, prevent compliance. The Permittees collectively retained a consultant team to assist with developing a public agency project element within the Model WQMP in FY 2009-10. The cost of this work in FY 2009-10 was $60,000, and continuation of this work in FY 2010-11 is approximated to be $75,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. The cost to develop public agency WQMPs for road, drainage facility, public utility, linear, and other projects with incorporation of LID principals to implement this mandated activity is in excess of $1,000. For FY 2009-10, the approximate cost for this program is $5,800. For FY 2010-11, the approximate cost for this program is $7,700. The costs of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(ii) Hydrologic Conditions of Concern ("HCOC"): Subsection XII.D of the 2009 Permit requires the Permittees to address the impact of urbanization on downstream hydrology. Subsection XII.D.1 requires each Priority Development Project to ascertain the impact of the development on the site's hydrologic regime based on the two-year frequency storm event and include the findings in the WQMP. The cost to assess HCOCs for public agency projects to comply with this mandated activity is in excess of $1,000. The cost of this new

mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(e) Total Maximum Daily Loads (TMDLs): Section XVIII of the 2009 Permit contains a new program involving what is known as "Total Maximum Daily Loads" or "TMDLs" as follows:

(i) Permit Subsection XVIII.B.9 requires the development and implementation of a Constituent Specific Source Control Plan (including a monitoring program) in connection with a Metals TMDL for Coyote Creek and San Gabriel River. The Constituent Specific Source Control Plan is required to be designed and implemented to ensure compliance with specific numeric effluent limits taken from the wasteload allocations set forth the Metals TMDL for Coyote Creek and San Gabriel River, as set forth in Table 6 on page 73 of the 2009 Permit. The costs to comply with this new TMDL-related program will be in excess of $1,000.

This TMDL-related program was not required as a part of the 2002 Permit and thus is a new program under the 2009 Permit. Unless modified, this TMDL-related program will continue throughout the life of the 2009 Permit, and indefinitely into the future as this TMDL program will be carried forward into future iterations of the Municipal Permits.

7. I am informed and believe that there are no dedicated State, federal or regional funds that are or will be available to pay for any of these new programs/activities. I am not aware of any fee or tax which the City would have

the discretion to impose under California law, to recover any portion of these new programs/activities. I further am informed and believe that the only available source to pay for these new programs/activities are and will be the City's General Fund.

Executed this 23rd day of June, 2010 at Brea, California.

I declare under penalty of perjury that the foregoing is true and correct.

Charlie View
Director of Public Works

DECLARATION OF

JAMES A. BIERY FOR CITY OF BUENA PARK.

DECLARATION OF JAMES A. BIERY ON BEHALF OF THE CITY OF BUENA PARK IN SUPPORT OF TEST CLAIM

I, James A. Biery, declare as follows:

1. I make this declaration based upon my own personal knowledge, except for matters set forth herein on information and belief, and as to those matters I believe them to be true, and if called upon to testify, I could and would competently testify to the matters set forth herein under oath.

2. I am employed by the City of City of Buena Park (hereafter, "City") as the Director of Public Works.

3. I have held my current position for approximately eight years. My duties include managing the Public Works Department and I oversee divisional supervisors in the engineering, traffic, streets, utilities, government facilities, equipment maintenance, and environmental compliance divisions.

4. I have reviewed the California Regional Water Quality Control Board Santa Ana Region ("RWQCB"), Order No. R8-2009-0030 (NPDES No. CAS618030) issued by the Santa Ana RWQCB on May 22, 2009 (the "2009 Permit") and am familiar with the requirements of the Permit as it applies to the City.

5. I have also reviewed and I am familiar with the requirements of the Order No. R8-2002-0010 (NPDES CAS618030)

issued by the Santa Ana RWQCB on January 18, 2002 (the "2002 Permit").

6. Based on my understanding of the requirements of the 2002 Permit and the requirements of the 2009 Permit, I believe the 2009 Permit requires the Permittees to perform the following new activities, among others, that are not required by the 2002 Permit, and which are unique to local governmental entities:

(a) Municipal Inventories: Sections IX.1 and X of the 2009 Permit require the Permittee to maintain an inventory of industrial and commercial facilities/businesses within its jurisdiction, which must be maintained in a computer-based database system. Inclusion of a Geographical Information System (GIS) is required, with latitude/longitude (in decimals) or NAD83/WGS8439 compatible formatting. The cost to create, upgrade and/or maintain GIS capability to implement this mandated activity is in excess of $1,000. For Fiscal Year (FY) 2009-10, the approximate cost for this program is $196,500. For FY 2010-11, the approximate cost for this program is $42,000. The costs of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(b) Residential Program

(i) Common Interest Area (CIA)/Homeowner Association (HOA) Pilot Program: Subsection XI.4 of the 2009 Permit requires the Permittees to develop a pilot program to control pollutant discharges from

common interest areas and areas managed by homeowner associations or management companies. Program activities to be funded include: evaluation of applicable regional programs and studies to encourage efficient water use and to minimize runoff, such as those developed by the Municipal Water District of Orange County (MWDOC) and the Irvine Ranch Water District (IRWD) and development of a pilot program to include design and dissemination of educational and outreach materials, determination of baseline conditions and measurable target outcomes, and assessment of performance. The Permittees will collectively retain a consultant to perform this mandated activity in FY 2010-11. The cost of developing the pilot HOA program is estimated to be $40,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with the mandated activities in FY 2010-11 is detailed in the enclosed city cost-share summary.

(c) Public Education and Outreach

(i) Public Awareness Survey: Subsection XIII.1 of the 2009 Permit requires the Permittees to complete a public awareness survey to determine the effectiveness of the current public and business education strategy and any need for changes to the current multimedia public education efforts. The Permittees collectively retained a consultant to perform this mandated activity in FY 2009-10. The cost of developing and conducting this survey and analyzing the results for the city stakeholders

was $80,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with the mandated activities in FY 2009-10 is detailed in the enclosed city cost-share summary.

(ii) Workshops: Subsection XIII.4 of the 2009 Permit requires the Permittees to conduct sector-specific workshops, individually or on a regional basis by July 1, 2010 and on an annual basis thereafter. The target sectors include manufacturing facilities; mobile service industry; commercial, distribution and retail sales industry; residential/commercial landscape construction and services industry; residential and commercial construction industry; and residential and community activities. The Permittees collectively retained County staff to assist with these mandated activities. The cost of the workshops in FY 2009-10 was $9,000. The cost of the workshops in FY 2010-11 is estimated to be $10,000. The costs of this new program will continue into the future throughout the 2009 Permit and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit. Each Permittee's share of these mandated costs is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. There

will be additional costs incurred by the City in excess of $1,000 to cover staff attendance at the workshops and other related program participation.

(iii) Public Participation: Subsection XIII.7 of the 2009 Permit requires the Permittees to develop and implement a mechanism for public participation in the updating and implementation of the Drainage Area Management Plans, monitoring plans, Water Quality Management Plan guidance and Fact Sheets for various activities. The public shall be informed of the availability of these documents through public notices in local newspapers, County and/or city websites, local libraries/city halls and/or courthouses. The Permittees collectively retained County staff to assist with these mandated activities. The cost to develop and implement a stakeholder advisory process in FY 2009-10 was approximately $2,500 and is expected to be $2,500 in FY 2010-11. The costs of this new program will continue into the future throughout the 2009 Permit to continue to notify the public of new program developments and documents. Each Permittee's share of these mandated costs is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. There will be additional costs incurred by the City in excess of $1,000 to cover staff attendance at stakeholder meetings and other related program participation.

(d) New/Revised Development Programs and Standards

(i) Low Impact Development (LID) and the Model Water Quality Management Plan (WQMP): Subsection XII.C of the 2009 Permit requires the Permittees to incorporate LID principals and structural features into Public Agency Priority Development Projects and in other instances incorporate United States Environmental Protection Agency (US EPA) Guidance entitled, *"Managing Wet Weather with Green Infrastructure: Green Streets."* These include certain road, drainage facility, public utility, linear, and other projects which have constraints that, in some cases, prevent compliance. The Permittees collectively retained a consultant team to assist with developing a public agency project element within the Model WQMP in FY 2009-10. The cost of this work in FY 2009-10 was $60,000, and continuation of this work in FY 2010-11 is approximated to be $75,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. The cost to develop public agency WQMPs for road, drainage facility, public utility, linear, and other projects with incorporation of LID principals to implement this mandated activity is in excess of $1,000. For FY 2009-10, the approximate cost for this program is $15,000. For FY 2010-11, the approximate cost for this program is $360,000. The costs of this new

mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(ii) Hydrologic Conditions of Concern ("HCOC"): Subsection XII.D of the 2009 Permit requires the Permittees to address the impact of urbanization on downstream hydrology. Subsection XII.D.1 requires each Priority Development Project to ascertain the impact of the development on the site's hydrologic regime based on the two-year frequency storm event and include the findings in the WQMP. The cost to assess HCOCs for public agency projects to comply with this mandated activity is in excess of $1,000. The cost of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(e) Total Maximum Daily Loads (TMDLs): Section XVIII of the 2009 Permit contains a new program involving what is known as "Total Maximum Daily Loads" or "TMDLs" as follows:

(i) Permit Subsection XVIII.B.9 requires the development and implementation of a Constituent Specific Source Control Plan (including a monitoring program) in connection with a Metals TMDL for Coyote Creek and San Gabriel River. The Constituent Specific Source Control Plan is required to be designed and implemented to ensure compliance with specific numeric effluent limits taken from the wasteload allocations

set forth the Metals TMDL for Coyote Creek and San Gabriel River, as set forth in Table 6 on page 73 of the 2009 Permit. The costs to comply with this new TMDL-related program will be in excess of $1,000.

This TMDL-related program was not required as a part of the 2002 Permit and thus is a new program under the 2009 Permit. Unless modified, this TMDL-related program will continue throughout the life of the 2009 Permit, and indefinitely into the future as this TMDL program will be carried forward into future iterations of the Municipal Permits.

7. I am informed and believe that there are no dedicated State, federal or regional funds that are or will be available to pay for any of these new programs/activities. I am not aware of any fee or tax which the City would have the discretion to impose under California law, to recover any portion of these new programs/activities. I further am informed and believe that the only available source to pay for these new programs/activities are and will be the City's General Fund.

Executed this 23rd day of June, 2010 at Buena Park, California.

I declare under penalty of perjury that the foregoing is true and correct.

James A. Biery
Director of Public Works

DECLARATION OF PETER NAGHAVI

FOR CITY OF COSTA MESA.

DECLARATION OF PETER NAGHAVI ON BEHALF OF THE CITY OF COSTA MESA IN SUPPORT OF TEST CLAIM

I, Peter Naghavi, declare as follows:

1. I make this declaration based upon my own personal knowledge, except for matters set forth herein on information and belief, and as to those matters I believe them to be true, and if called upon to testify, I could and would competently testify to the matters set forth herein under oath.

2. I am employed by the City of Costa Mesa (hereafter, "City") as the Director, Department of Public Services.

3. I have held my current position for approximately 2 years. My duties include managing the Public Services Department and I oversee divisional supervisors in Engineering, Transportation and Maintenance Services.

4. I have reviewed the California Regional Water Quality Control Board Santa Ana Region ("RWQCB"), Order No. R8-2009-0030 (NPDES No. CAS618030) issued by the Santa Ana RWQCB on May 22, 2009 (the "2009 Permit") and am familiar with the requirements of the Permit as it applies to the City.

5. I have also reviewed and I am familiar with the requirements of the Order No. R8-2002-0010 (NPDES CAS618030) issued by the Santa Ana RWQCB on January 18, 2002 (the "2002

Permit").

6. Based on my understanding of the requirements of the 2002 Permit and the requirements of the 2009 Permit, I believe the 2009 Permit requires the Permittees to perform the following new activities, among others, that are not required by the 2002 Permit, and which are unique to local governmental entities:

(a) Municipal Inventories: Sections IX.1 and X of the 2009 Permit require the Permittee to maintain an inventory of industrial and commercial facilities/businesses within its jurisdiction, which must be maintained in a computer-based database system. Inclusion of a Geographical Information System (GIS) is required, with latitude/longitude (in decimals) or NAD83/WGS8439 compatible formatting. The cost to create, upgrade and/or maintain GIS capability to implement this mandated activity is in excess of $1,000. For Fiscal Year (FY) 2009-10, the approximate cost for this program is $16,494. For FY 2010-11, the approximate cost for this program is $17,557. The costs of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(b) Residential Program

(i) Common Interest Area (CIA)/Homeowner Association (HOA) Pilot Program: Subsection XI.4 of the 2009 Permit requires the Permittees to develop a pilot program to control pollutant discharges from common interest areas and areas managed by homeowner associations or

management companies. Program activities to be funded include: evaluation of applicable regional programs and studies to encourage efficient water use and to minimize runoff, such as those developed by the Municipal Water District of Orange County (MWDOC) and the Irvine Ranch Water District (IRWD) and development of a pilot program to include design and dissemination of educational and outreach materials, determination of baseline conditions and measurable target outcomes, and assessment of performance. The Permittees will collectively retain a consultant to perform this mandated activity in FY 2010-11. The cost of developing the pilot HOA program is estimated to be $40,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with the mandated activities in FY 2010-11 is detailed in the enclosed city cost-share summary.

(c) Public Education and Outreach

(i) Public Awareness Survey: Subsection XIII.1 of the 2009 Permit requires the Permittees to complete a public awareness survey to determine the effectiveness of the current public and business education strategy and any need for changes to the current multimedia public education efforts. The Permittees collectively retained a consultant to perform this mandated activity in FY 2009-10. The cost of developing and conducting this survey and analyzing the results for the city stakeholders was $80,000. Each Permittee's share of this mandated cost is based on a

formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with the mandated activities in FY 2009-10 is detailed in the enclosed city cost-share summary.

(ii) Workshops: Subsection XIII.4 of the 2009 Permit requires the Permittees to conduct sector-specific workshops, individually or on a regional basis by July 1, 2010 and on an annual basis thereafter. The target sectors include manufacturing facilities; mobile service industry; commercial, distribution and retail sales industry; residential/commercial landscape construction and services industry; residential and commercial construction industry; and residential and community activities. The Permittees collectively retained County staff to assist with these mandated activities. The cost of the workshops in FY 2009-10 was $9,000. The cost of the workshops in FY 2010-11 is estimated to be $10,000. The costs of this new program will continue into the future throughout the 2009 Permit and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit. Each Permittee's share of these mandated costs is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. There will be additional costs incurred by the City in excess of $1,000 to cover staff attendance at the workshops and other related program participation.

(iii) Public Participation: Subsection XIII.7 of the 2009 Permit requires the Permittees to develop and implement a mechanism for public participation in the updating and implementation of the Drainage Area Management Plans, monitoring plans, Water Quality Management Plan guidance and Fact Sheets for various activities. The public shall be informed of the availability of these documents through public notices in local newspapers, County and/or city websites, local libraries/city halls and/or courthouses. The Permittees collectively retained County staff to assist with these mandated activities. The cost to develop and implement a stakeholder advisory process in FY 2009-10 was approximately $2,500 and is expected to be $2,500 in FY 2010-11. The costs of this new program will continue into the future throughout the 2009 Permit to continue to notify the public of new program developments and documents. Each Permittee's share of these mandated costs is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. There will be additional costs incurred by the City in excess of $1,000 to cover staff attendance at stakeholder meetings and other related program participation.

(d) New/Revised Development Programs and Standards

(i) Low Impact Development (LID) and the Model Water Quality Management Plan (WQMP): Subsection XII.C of the 2009 Permit

requires the Permittees to incorporate LID principals and structural features into Public Agency Priority Development Projects and in other instances incorporate United States Environmental Protection Agency (US EPA) Guidance entitled, *"Managing Wet Weather with Green Infrastructure: Green Streets."* These include certain road, drainage facility, public utility, linear, and other projects which have constraints that, in some cases, prevent compliance. The Permittees collectively retained a consultant team to assist with developing a public agency project element within the Model WQMP in FY 2009-10. The cost of this work in FY 2009-10 was $60,000, and continuation of this work in FY 2010-11 is approximated to be $75,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. The cost to develop public agency WQMPs for road, drainage facility, public utility, linear, and other projects with incorporation of LID principals to implement this mandated activity is in excess of $1,000. For FY 2009-10, the approximate cost for this program is $4,229. For FY 2010-11, the approximate cost for this program is $34,755. The costs of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(ii) Hydrologic Conditions of Concern ("HCOC"): Subsection XII.D of the 2009 Permit requires the Permittees to address the impact of urbanization on downstream hydrology. Subsection XII.D.1 requires each Priority Development Project to ascertain the impact of the development on the site's hydrologic regime based on the two-year frequency storm event and include the findings in the WQMP. The cost to assess HCOCs for public agency projects to comply with this mandated activity is in excess of $1,000. The cost of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(e) Total Maximum Daily Loads (TMDLs): Section XVIII of the 2009 Permit contains several new programs involving what are known as "Total Maximum Daily Loads" or "TMDLs" as follows:

(i) Permit Subsections XVIII.B.1 through B.4 requires compliance with a series of new numeric effluent limits based on waste load allocations within EPA-promulgated Toxic Pollutant TMDLs for San Diego Creek and Newport Bay. These new program requirements all involve the imposition of numeric effluent limits from waste load allocations from these TMDLs, as set forth in Tables 1 A/B/C, Table 2 A/B/C/D and Table 3 on pages 68 to 71 of the 2009 Permit. The costs to comply with each of these TMDL-related programs are in excess of $1,000.

(ii) Permit Subsection XVIII.B.5 imposes new TMDL-related requirements that will take effect upon adoption by State Board and the Office of Administrative Law ("OAL"), and concern compliance with numeric limits taken from wasteload allocations contained in the Regional Board adopted TMDLs for Organochlorine Compounds for Newport Bay and San Diego Creek (as set forth in Table 4 on page 71 of the 2009 Permit). Once in effect, the costs to comply with these new TMDL-related requirements will be in excess of $1,000.

(iii) Permit Subsection XVIII.B.7 imposes new requirements on the Permittees to participate in the development and implementation of additional Metals and Selenium TMDLs for the Newport Bay Watershed being developed by the Regional Board. The costs of these new TMDL-related programs will be in excess of $1,000.

(iv) Permit Subsection XVIII.B.8 imposes new requirements concerning the preparation of a Cooperative Watershed Program for Selenium TMDL for Newport Bay Watershed. The Cooperative Watershed Program must be submitted within 24 months of the date of adoption of the 2009 Permit or one month after the approval of the Selenium TMDL by the Office of Administrative Law. The costs of this new TMDL-related program will be in excess of $1,000.

(v) Permit Subsection XVIII.B.8 requires that, once the Cooperative Watershed Program for Selenium TMDL for Newport Bay Watershed has been prepared and approved, that the Permittees must then

implement this Program. The cost to implement this new TMDL-related, *i.e.*, to implement the Cooperative Watershed Program, will be in excess of $1,000.

(vi) Permit Subsection XVIII.C.1 impose new numeric effluent limits based on wasteload allocations from a Fecal Coliform/Bacteria TMDL for Newport Bay and San Diego Creek, as set forth in Tables 8A and 8B on pages 74-75 of the 2009 Permit. The costs to comply with this new TMDL-related program will be in excess of $1,000.

(vii) Permit Subsection XVIII.D.1 requires compliance with numeric effluent limits from waste load allocations from a TMDL for Diazinon and Chlorpyrifos for San Diego Creek and Chlorpyrifos for Newport Bay, as set forth in Tables 9A and 9B on page 76 of the 2009 Permit. The costs to comply with these new TMDL-related programs will be in excess of $1,000.

None of these TMDL-related programs are programs that were required as a part of the 2002 Permit and thus all are new programs under the 2009 Permit. The costs to be incurred by the Permittees for these various TMDL-related programs, as written into the 2009 Permit, collectively will be in the tens of millions of dollars and potentially in excess of one hundred million dollars. Unless modified, each of these TMDL-related programs will continue throughout the life of the 2009 Permit, and indefinitely into the future as these TMDL programs will be carried forward into future iterations of the Municipal Permits.

7. I am informed and believe that there are no dedicated State, federal or regional funds that are or will be available to pay for any of these new programs/activities. I am not aware of any fee or tax which the City would have the discretion to impose under California law, to recover any portion of these new programs/activities. I further am informed and believe that the only available source to pay for these new programs/activities are and will be the City's General Fund.

Executed this 23 day of June, 2010 at Costa Mesa, California.

I declare under penalty of perjury that the foregoing is true and correct.

Peter Naghavi
Director, Department of Public Services

DECLARATION OF GONZALO M. VAZQUEZ

FOR CITY OF CYPRESS.

DECLARATION OF GONZALO M. VAZQUEZ ON BEHALF OF THE CITY OF CYPRESS IN SUPPORT OF TEST CLAIM

I, Gonzalo Vazquez, declare as follows:

1. I make this declaration based upon my own personal knowledge, except for matters set forth herein on information and belief, and as to those matters I believe them to be true, and if called upon to testify, I could and would competently testify to the matters set forth herein under oath.

2. I am employed by the City of Cypress (hereafter, "City") as the Water Quality Manager.

3. I have held my current position for approximately 20 years. My duties include managing the Stormwater Program and overseeing divisional staff in the Environmental Division.

4. I have reviewed the California Regional Water Quality Control Board Santa Ana Region ("RWQCB"), Order No. R8-2009-0030 (NPDES No. CAS618030) issued by the Santa Ana RWQCB on May 22, 2009 (the "2009 Permit") and am familiar with the requirements of the Permit as it applies to the City.

5. I have also reviewed and I am familiar with the requirements of the Order No. R8-2002-0010 (NPDES CAS618030) issued by the Santa Ana RWQCB on January 18, 2002 (the "2002 Permit").

6. Based on my understanding of the requirements of the 2002 Permit and the requirements of the 2009 Permit, I believe the 2009 Permit requires the Permittees to perform the following new activities, among others, that are not required by the 2002 Permit, and which are unique to local governmental entities:

(a) Municipal Inventories: Sections IX.1 and X of the 2009 Permit require the Permittee to maintain an inventory of industrial and commercial facilities/businesses within its jurisdiction, which must be maintained in a computer-based database system. Inclusion of a Geographical Information System (GIS) is required, with latitude/longitude (in decimals) or NAD83/WGS8439 compatible formatting. The cost to create, upgrade and/or maintain GIS capability to implement this mandated activity is in excess of $1,000. For Fiscal Year (FY) 2009-10, the approximate cost for this program is $14,024. For FY 2010-11, the approximate cost for this program is $15,527. The costs of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(b) Residential Program

(i) Common Interest Area (CIA)/Homeowner Association (HOA) Pilot Program: Subsection XI.4 of the 2009 Permit requires the Permittees to develop a pilot program to control pollutant discharges from common interest areas and areas managed by homeowner associations or management companies. Program activities to be funded include:

evaluation of applicable regional programs and studies to encourage efficient water use and to minimize runoff, such as those developed by the Municipal Water District of Orange County (MWDOC) and the Irvine Ranch Water District (IRWD) and development of a pilot program to include design and dissemination of educational and outreach materials, determination of baseline conditions and measurable target outcomes, and assessment of performance. The Permittees will collectively retain a consultant to perform this mandated activity in FY 2010-11. The cost of developing the pilot HOA program is estimated to be $40,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with the mandated activities in FY 2010-11 is detailed in the enclosed city cost-share summary.

(c) Public Education and Outreach

(i) Public Awareness Survey: Subsection XIII.1 of the 2009 Permit requires the Permittees to complete a public awareness survey to determine the effectiveness of the current public and business education strategy and any need for changes to the current multimedia public education efforts. The Permittees collectively retained a consultant to perform this mandated activity in FY 2009-10. The cost of developing and conducting this survey and analyzing the results for the city stakeholders was $80,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The City's

proportional share of the budgeted costs for complying with the mandated activities in FY 2009-10 is detailed in the enclosed city cost-share summary.

(ii) Workshops: Subsection XIII.4 of the 2009 Permit requires the Permittees to conduct sector-specific workshops, individually or on a regional basis by July 1, 2010 and on an annual basis thereafter. The target sectors include manufacturing facilities; mobile service industry; commercial, distribution and retail sales industry; residential/commercial landscape construction and services industry; residential and commercial construction industry; and residential and community activities. The Permittees collectively retained County staff to assist with these mandated activities. The cost of the workshops in FY 2009-10 was $9,000. The cost of the workshops in FY 2010-11 is estimated to be $10,000. The costs of this new program will continue into the future throughout the 2009 Permit and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit. Each Permittee's share of these mandated costs is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. There will be additional costs incurred by the City in excess of $1,000 to cover staff attendance at the workshops and other related program participation.

(iii) Public Participation: Subsection XIII.7 of the 2009 Permit requires the Permittees to develop and implement a mechanism for public participation in the updating and implementation of the Drainage Area Management Plans, monitoring plans, Water Quality Management Plan guidance and Fact Sheets for various activities. The public shall be informed of the availability of these documents through public notices in local newspapers, County and/or city websites, local libraries/city halls and/or courthouses. The Permittees collectively retained County staff to assist with these mandated activities. The cost to develop and implement a stakeholder advisory process in FY 2009-10 was approximately $2,500 and is expected to be $2,500 in FY 2010-11. The costs of this new program will continue into the future throughout the 2009 Permit to continue to notify the public of new program developments and documents. Each Permittee's share of these mandated costs is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. There will be additional costs incurred by the City in excess of $1,000 to cover staff attendance at stakeholder meetings and other related program participation.

(d) New/Revised Development Programs and Standards

(i) Low Impact Development (LID) and the Model Water Quality Management Plan (WQMP): Subsection XII.C of the 2009 Permit

requires the Permittees to incorporate LID principals and structural features into Public Agency Priority Development Projects and in other instances incorporate United States Environmental Protection Agency (US EPA) Guidance entitled, *"Managing Wet Weather with Green Infrastructure: Green Streets."* These include certain road, drainage facility, public utility, linear, and other projects which have constraints that, in some cases, prevent compliance. The Permittees collectively retained a consultant team to assist with developing a public agency project element within the Model WQMP in FY 2009-10. The cost of this work in FY 2009-10 was $60,000, and continuation of this work in FY 2010-11 is approximated to be $75,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. The cost to develop public agency WQMPs for road, drainage facility, public utility, linear, and other projects with incorporation of LID principals to implement this mandated activity is in excess of $1,000. For FY 2009-10, the approximate cost for this program is $12,823. For FY 2010-11, the approximate cost for this program is $21,141. The costs of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(ii) Hydrologic Conditions of Concern ("HCOC"): Subsection XII.D of the 2009 Permit requires the Permittees to address the impact of urbanization on downstream hydrology. Subsection XII.D.1 requires each Priority Development Project to ascertain the impact of the development on the site's hydrologic regime based on the two-year frequency storm event and include the findings in the WQMP. The cost to assess HCOCs for public agency projects to comply with this mandated activity is in excess of $1,000. The cost of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(e) Total Maximum Daily Loads (TMDLs): Section XVIII of the 2009 Permit contains a new program involving what is known as "Total Maximum Daily Loads" or "TMDLs" as follows:

(i) Permit Subsection XVIII.B.9 requires the development and implementation of a Constituent Specific Source Control Plan (including a monitoring program) in connection with a Metals TMDL for Coyote Creek and San Gabriel River. The Constituent Specific Source Control Plan is required to be designed and implemented to ensure compliance with specific numeric effluent limits taken from the wasteload allocations set forth the Metals TMDL for Coyote Creek and San Gabriel River, as set forth in Table 6 on page 73 of the 2009 Permit. The costs to comply with this new TMDL-related program will be in excess of $1,000.

This TMDL-related program was not required as a part of the 2002 Permit and thus is a new program under the 2009 Permit. Unless modified, this TMDL-related program will continue throughout the life of the 2009 Permit, and indefinitely into the future as this TMDL program will be carried forward into future iterations of the Municipal Permits.

7. I am informed and believe that there are no dedicated State, federal or regional funds that are or will be available to pay for any of these new programs/activities. I am not aware of any fee or tax which the City would have the discretion to impose under California law, to recover any portion of these new programs/activities. I further am informed and believe that the only available source to pay for these new programs/activities are and will be the City's General Fund.

Executed this 24th day of June, 2010 at Cypress, California.

I declare under penalty of perjury that the foregoing is true and correct.

Gonzalo M. Vazquez
Water Quality Manager

DECLARATION OF STEVEN M. HAUERWAAS FOR THE CITY OF FOUNTAIN VALLEY

DECLARATION OF STEVEN M. HAUERWAAS ON BEHALF OF THE CITY OF THE CITY OF FOUNTAIN VALLEY IN SUPPORT OF TEST CLAIM

I, Steven M. Hauerwaas, declare as follows:

1. I make this declaration based upon my own personal knowledge, except for matters set forth herein on information and belief, and as to those matters I believe them to be true, and if called upon to testify, I could and would competently testify to the matters set forth herein under oath.

2. I am employed by the City of Fountain Valley (hereafter, "City") as the Environmental Services Administrator.

3. I have held my current position for approximately ten years. My duties include managing the City of Fountain Valley's Stormwater Pollution Prevention Program and other environmental compliance programs.

4. I have reviewed the California Regional Water Quality Control Board Santa Ana Region ("RWQCB"), Order No. R8-2009-0030 (NPDES No. CAS618030) issued by the Santa Ana RWQCB on May 22, 2009 (the "2009 Permit") and am familiar with the requirements of the Permit as it applies to the City.

5. I have also reviewed and I am familiar with the requirements of the Order No. R8-2002-0010 (NPDES CAS618030) issued by the Santa Ana RWQCB on January 18, 2002 (the "2002 Permit").

6. Based on my understanding of the requirements of the 2002 Permit and the requirements of the 2009 Permit, I believe the 2009 Permit requires the

Permittees to perform the following new activities, among others, that are not required by the 2002 Permit, and which are unique to local governmental entities:

(a) Municipal Inventories: Sections IX.1 and X of the 2009 Permit require the Permittee to maintain an inventory of industrial and commercial facilities/businesses within its jurisdiction, which must be maintained in a computer-based database system. Inclusion of a Geographical Information System (GIS) is required, with latitude/longitude (in decimals) or NAD83/WGS8439 compatible formatting. The cost to create, upgrade and/or maintain GIS capability to implement this mandated activity is in excess of $1,000. For Fiscal Year (FY) 2009-10, the approximate cost for this program is $2,400. For FY 2010-11, the approximate cost for this program is $2,400. The costs of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(b) Residential Program

(i) Common Interest Area (CIA)/Homeowner Association (HOA) Pilot Program: Subsection XI.4 of the 2009 Permit requires the Permittees to develop a pilot program to control pollutant discharges from common interest areas and areas managed by homeowner associations or management companies. Program activities to be funded include: evaluation of applicable regional programs and studies to encourage efficient water use and to minimize runoff, such as those developed by the Municipal Water District of Orange County (MWDOC) and the Irvine Ranch Water District (IRWD) and development of a pilot program to include design and dissemination of educational and outreach

materials, determination of baseline conditions and measurable target outcomes, and assessment of performance. The Permittees will collectively retain a consultant to perform this mandated activity in FY 2010-11. The cost of developing the pilot HOA program is estimated to be $40,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with the mandated activities in FY 2010-11 is detailed in the enclosed city cost-share summary.

(c) Public Education and Outreach

(i) Public Awareness Survey: Subsection XIII.1 of the 2009 Permit requires the Permittees to complete a public awareness survey to determine the effectiveness of the current public and business education strategy and any need for changes to the current multimedia public education efforts. The Permittees collectively retained a consultant to perform this mandated activity in FY 2009-10. The cost of developing and conducting this survey and analyzing the results for the city stakeholders was $80,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with the mandated activities in FY 2009-10 is detailed in the enclosed city cost-share summary.

(ii) Workshops: Subsection XIII.4 of the 2009 Permit requires the Permittees to conduct sector-specific workshops, individually or on a regional basis by July 1, 2010 and on an annual basis thereafter. The target sectors include

manufacturing facilities; mobile service industry; commercial, distribution and retail sales industry; residential/commercial landscape construction and services industry; residential and commercial construction industry; and residential and community activities. The Permittees collectively retained County staff to assist with these mandated activities. The cost of the workshops in FY 2009-10 was $9,000. The cost of the workshops in FY 2010-11 is estimated to be $10,000. The costs of this new program will continue into the future throughout the 2009 Permit and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit. Each Permittee's share of these mandated costs is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. There will be additional costs incurred by the City in excess of $1,000 to cover staff attendance at the workshops and other related program participation.

(iii) Public Participation: Subsection XIII.7 of the 2009 Permit requires the Permittees to develop and implement a mechanism for public participation in the updating and implementation of the Drainage Area Management Plans, monitoring plans, Water Quality Management Plan guidance and Fact Sheets for various activities. The public shall be informed of the availability of these documents through public notices in local newspapers, County and/or city websites, local libraries/city halls and/or courthouses. The Permittees collectively retained County staff to assist with these mandated activities. The cost to develop

and implement a stakeholder advisory process in FY 2009-10 was approximately $2,500 and is expected to be $2,500 in FY 2010-11. The costs of this new program will continue into the future throughout the 2009 Permit to continue to notify the public of new program developments and documents. Each Permittee's share of these mandated costs is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. There will be additional costs incurred by the City in excess of $1,000 to cover staff attendance at stakeholder meetings and other related program participation.

(d) New/Revised Development Programs and Standards

(i) Low Impact Development (LID) and the Model Water Quality Management Plan (WQMP): Subsection XII.C of the 2009 Permit requires the Permittees to incorporate LID principals and structural features into Public Agency Priority Development Projects and in other instances incorporate United States Environmental Protection Agency (US EPA) Guidance entitled, *"Managing Wet Weather with Green Infrastructure: Green Streets."* These include certain road, drainage facility, public utility, linear, and other projects which have constraints that, in some cases, prevent compliance. The Permittees collectively retained a consultant team to assist with developing a public agency project element within the Model WQMP in FY 2009-10. The cost of this work in FY 2009-10 was $60,000, and continuation of this work in FY 2010-11 is approximated to be $75,000. Each Permittee's share of this mandated cost is

based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. The cost to develop public agency WQMPs for road, drainage facility, public utility, linear, and other projects with incorporation of LID principals to implement this mandated activity is in excess of $1,000. For FY 2009-10, the approximate cost for this program is $6,000. For FY 2010-11, the approximate cost for this program is $15,000. The costs of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(ii) Hydrologic Conditions of Concern ("HCOC"): Subsection XII.D of the 2009 Permit requires the Permittees to address the impact of urbanization on downstream hydrology. Subsection XII.D.1 requires each Priority Development Project to ascertain the impact of the development on the site's hydrologic regime based on the two-year frequency storm event and include the findings in the WQMP. The cost to assess HCOCs for public agency projects to comply with this mandated activity is in excess of $1,000. The cost of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

7. I am informed and believe that there are no dedicated State, federal or regional funds that are or will be available to pay for any of these new

programs/activities. I am not aware of any fee or tax which the City would have the discretion to impose under California law, to recover any portion of these new programs/activities. I further am informed and believe that the only available source to pay for these new programs/activities are and will be the City's General Fund.

Executed this 24 day of June, 2010 at Fountain Valley, California.

I declare under penalty of perjury that the foregoing is true and correct.

Steven M. Hauerwaas

Steven M. Hauerwaas
Environmental Services Administrator

DECLARATION OF TRUNG PHAN FOR CITY OF FULLERTON.

DECLARATION OF TRUNG PHAN ON BEHALF OF THE CITY OF FULLERTON IN SUPPORT OF TEST CLAIM

I, TRUNG PHAN, declare as follows:

1. I make this declaration based upon my own personal knowledge, except for matters set forth herein on information and belief, and as to those matters I believe them to be true, and if called upon to testify, I could and would competently testify to the matters set forth herein under oath.

2. I am employed by the City of Fullerton (hereafter, "City") as the Stormwater/ Wastewater Compliance Specialist.

3. I have held my current position for approximately 4 years. My duties include managing the stormwater program for several departments.

4. I have reviewed the California Regional Water Quality Control Board Santa Ana Region ("RWQCB"), Order No. R8-2009-0030 (NPDES No. CAS618030) issued by the Santa Ana RWQCB on May 22, 2009 (the "2009 Permit") and am familiar with the requirements of the Permit as it applies to the City.

5. I have also reviewed and I am familiar with the requirements of the Order No. R8-2002-0010 (NPDES CAS618030) issued by the Santa Ana RWQCB on January 18, 2002 (the "2002 Permit").

6. Based on my understanding of the requirements of the 2002 Permit and the requirements of the 2009 Permit, I believe the 2009 Permit requires the Permittees to perform the following new activities, among others, that are not required by the 2002 Permit, and which are unique to local governmental entities:

(a) Municipal Inventories: Sections IX.1 and X of the 2009 Permit require the Permittee to maintain an inventory of industrial and commercial facilities/businesses within its jurisdiction, which must be maintained in a computer-based database system. Inclusion of a Geographical Information System (GIS) is required, with latitude/longitude (in decimals) or NAD83/WGS8439 compatible formatting. The cost to create, upgrade and/or maintain GIS capability to implement this mandated activity is in excess of $1,000. For Fiscal Year (FY) 2009-10, the approximate cost for this program is $50,000. For FY 2010-11, the approximate cost for this program is $55,000. The costs of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(b) Residential Program

(i) Common Interest Area (CIA)/Homeowner Association (HOA) Pilot Program: Subsection XI.4 of the 2009 Permit requires the Permittees to develop a pilot program to control pollutant discharges from common interest areas and areas managed by homeowner associations or management companies. Program activities to be funded include:

evaluation of applicable regional programs and studies to encourage efficient water use and to minimize runoff, such as those developed by the Municipal Water District of Orange County (MWDOC) and the Irvine Ranch Water District (IRWD) and development of a pilot program to include design and dissemination of educational and outreach materials, determination of baseline conditions and measurable target outcomes, and assessment of performance. The Permittees will collectively retain a consultant to perform this mandated activity in FY 2010-11. The cost of developing the pilot HOA program is estimated to be $40,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with the mandated activities in FY 2010-11 is detailed in the enclosed city cost-share summary.

(c) Public Education and Outreach

(i) Public Awareness Survey: Subsection XIII.1 of the 2009 Permit requires the Permittees to complete a public awareness survey to determine the effectiveness of the current public and business education strategy and any need for changes to the current multimedia public education efforts. The Permittees collectively retained a consultant to perform this mandated activity in FY 2009-10. The cost of developing and conducting this survey and analyzing the results for the city stakeholders was $80,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The City's

proportional share of the budgeted costs for complying with the mandated activities in FY 2009-10 is detailed in the enclosed city cost-share summary.

(ii) Workshops: Subsection XIII.4 of the 2009 Permit requires the Permittees to conduct sector-specific workshops, individually or on a regional basis by July 1, 2010 and on an annual basis thereafter. The target sectors include manufacturing facilities; mobile service industry; commercial, distribution and retail sales industry; residential/commercial landscape construction and services industry; residential and commercial construction industry; and residential and community activities. The Permittees collectively retained County staff to assist with these mandated activities. The cost of the workshops in FY 2009-10 was $9,000. The cost of the workshops in FY 2010-11 is estimated to be $10,000. The costs of this new program will continue into the future throughout the 2009 Permit and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit. Each Permittee's share of these mandated costs is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. There will be additional costs incurred by the City in excess of $1,000 to cover staff attendance at the workshops and other related program participation.

(iii) Public Participation: Subsection XIII.7 of the 2009 Permit requires the Permittees to develop and implement a mechanism for public participation in the updating and implementation of the Drainage Area Management Plans, monitoring plans, Water Quality Management Plan guidance and Fact Sheets for various activities. The public shall be informed of the availability of these documents through public notices in local newspapers, County and/or city websites, local libraries/city halls and/or courthouses. The Permittees collectively retained County staff to assist with these mandated activities. The cost to develop and implement a stakeholder advisory process in FY 2009-10 was approximately $2,500 and is expected to be $2,500 in FY 2010-11. The costs of this new program will continue into the future throughout the 2009 Permit to continue to notify the public of new program developments and documents. Each Permittee's share of these mandated costs is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. There will be additional costs incurred by the City in excess of $1,000 to cover staff attendance at stakeholder meetings and other related program participation.

(d) New/Revised Development Programs and Standards

(i) Low Impact Development (LID) and the Model Water Quality Management Plan (WQMP): Subsection XII.C of the 2009 Permit

requires the Permittees to incorporate LID principals and structural features into Public Agency Priority Development Projects and in other instances incorporate United States Environmental Protection Agency (US EPA) Guidance entitled, *"Managing Wet Weather with Green Infrastructure: Green Streets."* These include certain road, drainage facility, public utility, linear, and other projects which have constraints that, in some cases, prevent compliance. The Permittees collectively retained a consultant team to assist with developing a public agency project element within the Model WQMP in FY 2009-10. The cost of this work in FY 2009-10 was $60,000, and continuation of this work in FY 2010-11 is approximated to be $75,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. The cost to develop public agency WQMPs for road, drainage facility, public utility, linear, and other projects with incorporation of LID principals to implement this mandated activity is in excess of $1,000. For FY 2009-10, the approximate cost for this program is $670,000 For FY 2010-11, the approximate cost for this program is $737,000. The costs of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(ii) Hydrologic Conditions of Concern ("HCOC"): Subsection XII.D of the 2009 Permit requires the Permittees to address the impact of urbanization on downstream hydrology. Subsection XII.D.1 requires each Priority Development Project to ascertain the impact of the development on the site's hydrologic regime based on the two-year frequency storm event and include the findings in the WQMP. The cost to assess HCOCs for public agency projects to comply with this mandated activity is in excess of $1,000. The cost of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(e) Total Maximum Daily Loads (TMDLs): Section XVIII of the 2009 Permit contains a new program involving what is known as "Total Maximum Daily Loads" or "TMDLs" as follows:

(i) Permit Subsection XVIII.B.9 requires the development and implementation of a Constituent Specific Source Control Plan (including a monitoring program) in connection with a Metals TMDL for Coyote Creek and San Gabriel River. The Constituent Specific Source Control Plan is required to be designed and implemented to ensure compliance with specific numeric effluent limits taken from the wasteload allocations set forth the Metals TMDL for Coyote Creek and San Gabriel River, as set forth in Table 6 on page 73 of the 2009 Permit. The costs to comply with this new TMDL-related program will be in excess of $1,000.

This TMDL-related program was not required as a part of the 2002 Permit and thus is a new program under the 2009 Permit. Unless modified, this TMDL-related program will continue throughout the life of the 2009 Permit, and indefinitely into the future as this TMDL program will be carried forward into future iterations of the Municipal Permits.

7. I am informed and believe that there are no dedicated State, federal or regional funds that are or will be available to pay for any of these new programs/activities. I am not aware of any fee or tax which the City would have the discretion to impose under California law, to recover any portion of these new programs/activities. I further am informed and believe that the only available source to pay for these new programs/activities are and will be the City's General Fund.

Executed this 24th day of June, 2010 Fullerton, California.

I declare under penalty of perjury that the foregoing is true and correct.

Trung Phan
Stormwater/ Wastewater Compliance Specialist

DECLARATION OF TRAVIS K. HOPKINS

FOR CITY OF HUNTINGTON BEACH.

DECLARATION OF TRAVIS K. HOPKINS ON BEHALF OF THE CITY OF HUNTINGTON BEACH IN SUPPORT OF TEST CLAIM

I, Travis K. Hopkins, declare as follows:

1. I make this declaration based upon my own personal knowledge, except for matters set forth herein on information and belief, and as to those matters I believe them to be true, and if called upon to testify, I could and would competently testify to the matters set forth herein under oath.

2. I am employed by the City of Huntington Beach (hereafter, "City") as the Director of Public Works.

3. I have held my current position for approximately 2-1/2 years. My duties include managing the Public Works Department and I oversee divisional supervisors in Engineering, Transportation, Utilities, Facilities, Streets, Parks, Trees, and Landscape.

4. I have reviewed the California Regional Water Quality Control Board Santa Ana Region ("RWQCB"), Order No. R8-2009-0030 (NPDES No. CAS618030) issued by the Santa Ana RWQCB on May 22, 2009 (the "2009 Permit") and am familiar with the requirements of the Permit as it applies to the City.

5. I have also reviewed and I am familiar with the requirements of the Order No. R8-2002-0010 (NPDES CAS618030) issued by the Santa Ana RWQCB on January 18, 2002 (the "2002

Permit").

6. Based on my understanding of the requirements of the 2002 Permit and the requirements of the 2009 Permit, I believe the 2009 Permit requires the Permittees to perform the following new activities, among others, that are not required by the 2002 Permit, and which are unique to local governmental entities:

(a) Municipal Inventories: Sections IX.1 and X of the 2009 Permit require the Permittee to maintain an inventory of industrial and commercial facilities/businesses within its jurisdiction, which must be maintained in a computer-based database system. Inclusion of a Geographical Information System (GIS) is required, with latitude/longitude (in decimals) or NAD83/WGS8439 compatible formatting. The cost to create, upgrade and/or maintain GIS capability to implement this mandated activity is in excess of $1,000. For Fiscal Year (FY) 2009-10, the approximate cost for this program is $2,500. For FY 2010-11, the approximate cost for this program is $750. The costs of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(b) Residential Program

(i) Common Interest Area (CIA)/Homeowner Association (HOA) Pilot Program: Subsection XI.4 of the 2009 Permit requires the Permittees to develop a pilot program to control pollutant discharges from common interest areas and areas managed by homeowner associations or

management companies. Program activities to be funded include: evaluation of applicable regional programs and studies to encourage efficient water use and to minimize runoff, such as those developed by the Municipal Water District of Orange County (MWDOC) and the Irvine Ranch Water District (IRWD) and development of a pilot program to include design and dissemination of educational and outreach materials, determination of baseline conditions and measurable target outcomes, and assessment of performance. The Permittees will collectively retain a consultant to perform this mandated activity in FY 2010-11. The cost of developing the pilot HOA program is estimated to be $40,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with the mandated activities in FY 2010-11 is detailed in the enclosed city cost-share summary.

(c) Public Education and Outreach

(i) Public Awareness Survey: Subsection XIII.1 of the 2009 Permit requires the Permittees to complete a public awareness survey to determine the effectiveness of the current public and business education strategy and any need for changes to the current multimedia public education efforts. The Permittees collectively retained a consultant to perform this mandated activity in FY 2009-10. The cost of developing and conducting this survey and analyzing the results for the city stakeholders was $80,000. Each Permittee's share of this mandated cost is based on a

formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with the mandated activities in FY 2009-10 is detailed in the enclosed city cost-share summary.

(ii) Workshops: Subsection XIII.4 of the 2009 Permit requires the Permittees to conduct sector-specific workshops, individually or on a regional basis by July 1, 2010 and on an annual basis thereafter. The target sectors include manufacturing facilities; mobile service industry; commercial, distribution and retail sales industry; residential/commercial landscape construction and services industry; residential and commercial construction industry; and residential and community activities. The Permittees collectively retained County staff to assist with these mandated activities. The cost of the workshops in FY 2009-10 was $9,000. The cost of the workshops in FY 2010-11 is estimated to be $10,000. The costs of this new program will continue into the future throughout the 2009 Permit and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit. Each Permittee's share of these mandated costs is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. There will be additional costs incurred by the City in excess of $1,000 to cover staff attendance at the workshops and other related program participation.

(iii) Public Participation: Subsection XIII.7 of the 2009 Permit requires the Permittees to develop and implement a mechanism for public participation in the updating and implementation of the Drainage Area Management Plans, monitoring plans, Water Quality Management Plan guidance and Fact Sheets for various activities. The public shall be informed of the availability of these documents through public notices in local newspapers, County and/or city websites, local libraries/city halls and/or courthouses. The Permittees collectively retained County staff to assist with these mandated activities. The cost to develop and implement a stakeholder advisory process in FY 2009-10 was approximately $2,500 and is expected to be $2,500 in FY 2010-11. The costs of this new program will continue into the future throughout the 2009 Permit to continue to notify the public of new program developments and documents. Each Permittee's share of these mandated costs is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. There will be additional costs incurred by the City in excess of $1,000 to cover staff attendance at stakeholder meetings and other related program participation.

(d) New/Revised Development Programs and Standards

(i) Low Impact Development (LID) and the Model Water Quality Management Plan (WQMP): Subsection XII.C of the 2009 Permit

requires the Permittees to incorporate LID principals and structural features into Public Agency Priority Development Projects and in other instances incorporate United States Environmental Protection Agency (US EPA) Guidance entitled, *"Managing Wet Weather with Green Infrastructure: Green Streets."* These include certain road, drainage facility, public utility, linear, and other projects which have constraints that, in some cases, prevent compliance. The Permittees collectively retained a consultant team to assist with developing a public agency project element within the Model WQMP in FY 2009-10. The cost of this work in FY 2009-10 was $60,000, and continuation of this work in FY 2010-11 is approximated to be $75,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. The cost to develop public agency WQMPs for road, drainage facility, public utility, linear, and other projects with incorporation of LID principals to implement this mandated activity is in excess of $1,000. For FY 2010-11, the approximate cost for this program is $116,000. The costs of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(ii) Hydrologic Conditions of Concern ("HCOC"): Subsection XII.D of the 2009 Permit requires the Permittees to address the impact of urbanization on downstream hydrology. Subsection XII.D.1 requires each Priority Development Project to ascertain the impact of the development on the site's hydrologic regime based on the two-year frequency storm event and include the findings in the WQMP. The cost to assess HCOCs for public agency projects to comply with this mandated activity is in excess of $1,000. The cost of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

7. I am informed and believe that there are no dedicated State, federal or regional funds that are or will be available to pay for any of these new programs/activities. I am not aware of any fee or tax which the City would have the discretion to impose under California law, to recover any portion of these new programs/activities. I further am informed and believe that the only available source to pay for these new programs/activities are and will be the City's General Fund.

Executed this 23rd day of June, 2010 at Huntington Beach, California.

I declare under penalty of perjury that the foregoing is true and correct.

Travis K. Hopkins, PE
Director of Public Works

DECLARATION OF JAMES M. LOVING FOR CITY OF IRVINE

DECLARATION OF JAMES M. LOVING ON BEHALF OF THE CITY OF IRVINE IN SUPPORT OF TEST CLAIM

I, James M. Loving, declare as follows:

1. I make this declaration based upon my own personal knowledge, except for matters set forth herein on information and belief, and as to those matters I believe them to be true, and if called upon to testify, I could and would competently testify to the matters set forth herein under oath.

2. I am employed by the City of Irvine (hereafter, "City") as the Water Quality Administrator.

3. I have held my current position for approximately seven years. I have administered Irvine's Stormwater Program for approximately twenty years.

4. I have reviewed the California Regional Water Quality Control Board Santa Ana Region ("RWQCB"), Order No. R8-2009-0030 (NPDES No. CAS618030) issued by the Santa Ana RWQCB on May 22, 2009 (the "2009 Permit") and am familiar with the requirements of the Permit as it applies to the City.

5. I have also reviewed and I am familiar with the requirements of the Order No. R8-2002-0010 (NPDES CAS618030) issued by the Santa Ana RWQCB on January 18, 2002 (the "2002 Permit").

6. Based on my understanding of the requirements of the 2002 Permit and the requirements of the 2009 Permit, I believe the 2009 Permit requires the Permittees to perform the following new activities, among others, that are not

required by the 2002 Permit, and which are unique to local governmental entities:

(a) Residential Program

(i) Common Interest Area (CIA)/Homeowner Association (HOA) Pilot Program: Subsection XI.4 of the 2009 Permit requires the Permittees to develop a pilot program to control pollutant discharges from common interest areas and areas managed by homeowner associations or management companies. Program activities to be funded include: evaluation of applicable regional programs and studies to encourage efficient water use and to minimize runoff, such as those developed by the Municipal Water District of Orange County (MWDOC) and the Irvine Ranch Water District (IRWD) and development of a pilot program to include design and dissemination of educational and outreach materials, determination of baseline conditions and measurable target outcomes, and assessment of performance. The Permittees will collectively retain a consultant to perform this mandated activity in FY 2010-11. The cost of developing the pilot HOA program is estimated to be $40,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with the mandated activities in FY 2010-11 is detailed in the enclosed city cost-share summary.

(b) Public Education and Outreach

(i) Public Awareness Survey: Subsection XIII.1 of the 2009 Permit requires the Permittees to complete a public awareness survey to determine the effectiveness of the current public and business education strategy and any need

for changes to the current multimedia public education efforts. The Permittees collectively retained a consultant to perform this mandated activity in FY 2009-10. The cost of developing and conducting this survey and analyzing the results for the city stakeholders was $80,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with the mandated activities in FY 2009-10 is detailed in the enclosed city cost-share summary.

(ii) Workshops: Subsection XIII.4 of the 2009 Permit requires the Permittees to conduct sector-specific workshops, individually or on a regional basis by July 1, 2010 and on an annual basis thereafter. The target sectors include manufacturing facilities; mobile service industry; commercial, distribution and retail sales industry; residential/commercial landscape construction and services industry; residential and commercial construction industry; and residential and community activities. The Permittees collectively retained County staff to assist with these mandated activities. The cost of the workshops in FY 2009-10 was $9,000. The cost of the workshops in FY 2010-11 is estimated to be $10,000. The costs of this new program will continue into the future throughout the 2009 Permit and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit. Each Permittee's share of these mandated costs is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the

enclosed city cost-share summary. There will be additional costs incurred by the City in excess of $1,000 to cover staff attendance at the workshops and other related program participation.

(iii) Public Participation: Subsection XIII.7 of the 2009 Permit requires the Permittees to develop and implement a mechanism for public participation in the updating and implementation of the Drainage Area Management Plans, monitoring plans, Water Quality Management Plan guidance and Fact Sheets for various activities. The public shall be informed of the availability of these documents through public notices in local newspapers, County and/or city websites, local libraries/city halls and/or courthouses. The Permittees collectively retained County staff to assist with these mandated activities. The cost to develop and implement a stakeholder advisory process in FY 2009-10 was approximately $2,500 and is expected to be $2,500 in FY 2010-11. The costs of this new program will continue into the future throughout the 2009 Permit to continue to notify the public of new program developments and documents. Each Permittee's share of these mandated costs is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. There will be additional costs incurred by the City in excess of $1,000 to cover staff attendance at stakeholder meetings and other related program participation.

(c) New/Revised Development Programs and Standards

(i) Low Impact Development (LID) and the Model Water Quality Management Plan (WQMP): Subsection XII.C of the 2009 Permit requires the Permittees to incorporate LID principals and structural features into Public Agency Priority Development Projects and in other instances incorporate United States Environmental Protection Agency (US EPA) Guidance entitled, *"Managing Wet Weather with Green Infrastructure: Green Streets."* These include certain road, drainage facility, public utility, linear, and other projects which have constraints that, in some cases, prevent compliance. The Permittees collectively retained a consultant team to assist with developing a public agency project element within the Model WQMP in FY 2009-10. The cost of this work in FY 2009-10 was $60,000, and continuation of this work in FY 2010-11 is approximated to be $75,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. The cost to develop public agency WQMPs for road, drainage facility, public utility, linear, and other projects with incorporation of LID principals to implement this mandated activity is in excess of $1,000. The costs of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(ii) Hydrologic Conditions of Concern ("HCOC"): Subsection XII.D of the 2009 Permit requires the Permittees to address the impact of urbanization on downstream hydrology. Subsection XII.D.1 requires each Priority Development Project to ascertain the impact of the development on the site's hydrologic regime based on the two-year frequency storm event and include the findings in the WQMP. The cost to assess HCOCs for public agency projects to comply with this mandated activity is in excess of $1,000. The cost of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(d) Total Maximum Daily Loads (TMDLs): Section XVIII of the 2009 Permit contains several new programs involving what are known as "Total Maximum Daily Loads" or "TMDLs" as follows:

(i) Permit Subsections XVIII.B.1 through B.4 requires compliance with a series of new numeric effluent limits based on waste load allocations within EPA-promulgated Toxic Pollutant TMDLs for San Diego Creek and Newport Bay. These new program requirements all involve the imposition of numeric effluent limits from waste load allocations from these TMDLs, as set forth in Tables 1 A/B/C, Table 2 A/B/C/D and Table 3 on pages 68 to 71 of the 2009 Permit. The costs to comply with each of these TMDL-related programs are in excess of $1,000.

(ii) Permit Subsection XVIII.B.5 imposes new TMDL-related requirements that will take effect upon adoption by State Board and the Office of

Administrative Law ("OAL"), and concern compliance with numeric limits taken from wasteload allocations contained in the Regional Board adopted TMDLs for Organochlorine Compounds for Newport Bay and San Diego Creek (as set forth in Table 4 on page 71 of the 2009 Permit). Once in effect, the costs to comply with these new TMDL-related requirements will be in excess of $1,000.

(iii) Permit Subsection XVIII.B.7 imposes new requirements on the Permittees to participate in the development and implementation of additional Metals and Selenium TMDLs for the Newport Bay Watershed being developed by the Regional Board. The costs of these new TMDL-related programs will be in excess of $1,000.

(iv) Permit Subsection XVIII.B.8 imposes new requirements concerning the preparation of a Cooperative Watershed Program for Selenium TMDL for Newport Bay Watershed. The Cooperative Watershed Program must be submitted within 24 months of the date of adoption of the 2009 Permit or one month after the approval of the Selenium TMDL by the Office of Administrative Law. The costs of this new TMDL-related program will be in excess of $1,000.

(v) Permit Subsection XVIII.B.8 requires that, once the Cooperative Watershed Program for Selenium TMDL for Newport Bay Watershed has been prepared and approved, that the Permittees must then implement this Program. The cost to implement this new TMDL-related, *i.e.*, to implement the Cooperative Watershed Program, will be in excess of $1,000.

(vi) Permit Subsection XVIII.D.1 requires compliance with numeric effluent limits from waste load allocations from a TMDL for Diazinon and

Chlorpyrifos for San Diego Creek and Chlorpyrifos for Newport Bay, as set forth in Tables 9A and 9B on page 76 of the 2009 Permit. The costs to comply with these new TMDL-related programs will be in excess of $1,000.

None of these TMDL-related programs are programs that were required as a part of the 2002 Permit and thus all are new programs under the 2009 Permit. The costs to be incurred by the Permittees for these various TMDL-related programs, as written into the 2009 Permit, collectively will be in the tens of millions of dollars and potentially in excess of one hundred million dollars. Unless modified, each of these TMDL-related programs will continue throughout the life of the 2009 Permit, and indefinitely into the future as these TMDL programs will be carried forward into future iterations of the Municipal Permits.

7. I am informed and believe that there are no dedicated State, federal or regional funds that are or will be available to pay for any of these new programs/activities. I am not aware of any fee or tax which the City would have the discretion to impose under California law, to recover any portion of these new programs/activities. I further am informed and believe that the only available source to pay for these new programs/activities are and will be the City's General Fund.

Executed this 24th day of June, 2010 at Irvine, California.

I declare under penalty of perjury that the foregoing is true and correct.

James M. Loving
Water Quality Administrator

DECLARATION OF ROBERT WOODINGS FOR CITY OF LAKE FOREST

DECLARATION OF ROBERT WOODINGS ON BEHALF OF THE CITY OF LAKE FOREST IN SUPPORT OF TEST CLAIM

I, Robert Woodings, declare as follows:

1. I make this declaration based upon my own personal knowledge, except for matters set forth herein on information and belief, and as to those matters I believe them to be true, and if called upon to testify, I could and would competently testify to the matters set forth herein under oath.

2. I am employed by the City of Lake Forest (hereafter, "City") as the Director of Public Works/City Engineer.

3. I have held my current position for approximately18 years. My duties include directing the Public Works Department and the Water Quality Program.

4. I have reviewed the California Regional Water Quality Control Board Santa Ana Region ("RWQCB"), Order No. R8-2009-0030 (NPDES No. CAS618030) issued by the Santa Ana RWQCB on May 22, 2009 (the "2009 Permit") and am familiar with the requirements of the Permit as it applies to the City.

5. I have also reviewed and I am familiar with the requirements of the Order No. R8-2002-0010 (NPDES CAS618030) issued by the Santa Ana RWQCB on January 18, 2002 (the "2002 Permit").

6. Based on my understanding of the requirements of the 2002 Permit and the requirements of the 2009 Permit, I believe the 2009 Permit requires the Permittees to perform the following new activities, among others, that are not required by the 2002 Permit, and which are unique to local governmental entities:

(a) Municipal Inventories: Sections IX.1 and X of the 2009 Permit require the Permittee to maintain an inventory of industrial and commercial facilities/businesses within its jurisdiction, which must be maintained in a computer-based database system. Inclusion of a Geographical Information System (GIS) is required, with latitude/longitude (in decimals) or NAD83/WGS8439 compatible formatting. The cost to create, upgrade and/or maintain GIS capability to implement this mandated activity is in excess of $1,000. For Fiscal Year (FY) 2009-10, the approximate cost for this program is $6,800. This cost is an estimate based on staff time spent to developing the program only. This estimate does not include costs for software or any other technology implementation at this time. For FY 2010-11, the approximate cost for this program will exceed $1,000, but cannot be better defined at this time. The costs of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(b) Residential Program

(i) Common Interest Area (CIA)/Homeowner Association (HOA) Pilot Program: Subsection XI.4 of the 2009 Permit requires the

Permittees to develop a pilot program to control pollutant discharges from common interest areas and areas managed by homeowner associations or management companies. Program activities to be funded include: evaluation of applicable regional programs and studies to encourage efficient water use and to minimize runoff, such as those developed by the Municipal Water District of Orange County (MWDOC) and the Irvine Ranch Water District (IRWD) and development of a pilot program to include design and dissemination of educational and outreach materials, determination of baseline conditions and measurable target outcomes, and assessment of performance. The Permittees will collectively retain a consultant to perform this mandated activity in FY 2010-11. The cost of developing the pilot HOA program is estimated to be $40,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with the mandated activities in FY 2010-11 is detailed in the enclosed city cost-share summary.

(c) Public Education and Outreach

(i) Public Awareness Survey: Subsection XIII.1 of the 2009 Permit requires the Permittees to complete a public awareness survey to determine the effectiveness of the current public and business education strategy and any need for changes to the current multimedia public education efforts. The Permittees collectively retained a consultant to perform this mandated activity in FY 2009-10. The cost of developing and

conducting this survey and analyzing the results for the city stakeholders was $80,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with the mandated activities in FY 2009-10 is detailed in the enclosed city cost-share summary.

(ii) Workshops: Subsection XIII.4 of the 2009 Permit requires the Permittees to conduct sector-specific workshops, individually or on a regional basis by July 1, 2010 and on an annual basis thereafter. The target sectors include manufacturing facilities; mobile service industry; commercial, distribution and retail sales industry; residential/commercial landscape construction and services industry; residential and commercial construction industry; and residential and community activities. The Permittees collectively retained County staff to assist with these mandated activities. The cost of the workshops in FY 2009-10 was $9,000. The cost of the workshops in FY 2010-11 is estimated to be $10,000. The costs of this new program will continue into the future throughout the 2009 Permit and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit. Each Permittee's share of these mandated costs is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. There

will be additional costs incurred by the City in excess of $1,000 to cover staff attendance at the workshops and other related program participation.

(iii) Public Participation: Subsection XIII.7 of the 2009 Permit requires the Permittees to develop and implement a mechanism for public participation in the updating and implementation of the Drainage Area Management Plans, monitoring plans, Water Quality Management Plan guidance and Fact Sheets for various activities. The public shall be informed of the availability of these documents through public notices in local newspapers, County and/or city websites, local libraries/city halls and/or courthouses. The Permittees collectively retained County staff to assist with these mandated activities. The cost to develop and implement a stakeholder advisory process in FY 2009-10 was approximately $2,500 and is expected to be $2,500 in FY 2010-11. The costs of this new program will continue into the future throughout the 2009 Permit to continue to notify the public of new program developments and documents. Each Permittee's share of these mandated costs is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. There will be additional costs incurred by the City in excess of $1,000 to cover staff attendance at stakeholder meetings and other related program participation.

(d) New/Revised Development Programs and Standards

(i) Low Impact Development (LID) and the Model Water Quality Management Plan (WQMP): Subsection XII.C of the 2009 Permit requires the Permittees to incorporate LID principals and structural features into Public Agency Priority Development Projects and in other instances incorporate United States Environmental Protection Agency (US EPA) Guidance entitled, *"Managing Wet Weather with Green Infrastructure: Green Streets."* These include certain road, drainage facility, public utility, linear, and other projects which have constraints that, in some cases, prevent compliance. The Permittees collectively retained a consultant team to assist with developing a public agency project element within the Model WQMP in FY 2009-10. The cost of this work in FY 2009-10 was $60,000, and continuation of this work in FY 2010-11 is approximated to be $75,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. The cost to develop public agency WQMPs for road, drainage facility, public utility, linear, and other projects with incorporation of LID principals to implement this mandated activity is in excess of $1,000. The costs of this new mandated activity will continue into the future throughout this 2009

Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(ii) Hydrologic Conditions of Concern ("HCOC"): Subsection XII.D of the 2009 Permit requires the Permittees to address the impact of urbanization on downstream hydrology. Subsection XII.D.1 requires each Priority Development Project to ascertain the impact of the development on the site's hydrologic regime based on the two-year frequency storm event and include the findings in the WQMP. The cost to assess HCOCs for public agency projects to comply with this mandated activity is in excess of $1,000. The cost of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(e) Total Maximum Daily Loads (TMDLs): Section XVIII of the 2009 Permit contains several new programs involving what are known as "Total Maximum Daily Loads" or "TMDLs" as follows:

(i) Permit Subsections XVIII.B.1 through B.4 requires compliance with a series of new numeric effluent limits based on waste load allocations within EPA-promulgated Toxic Pollutant TMDLs for San Diego Creek and Newport Bay. These new program requirements all involve the imposition of numeric effluent limits from waste load allocations from these TMDLs, as set forth in Tables 1 A/B/C, Table 2 A/B/C/D and Table 3 on pages 68 to 71 of the 2009 Permit. The costs to

comply with each of these TMDL-related programs are in excess of $1,000.

(ii) Permit Subsection XVIII.B.5 imposes new TMDL-related requirements that will take effect upon adoption by State Board and the Office of Administrative Law ("OAL"), and concern compliance with numeric limits taken from wasteload allocations contained in the Regional Board adopted TMDLs for Organochlorine Compounds for Newport Bay and San Diego Creek (as set forth in Table 4 on page 71 of the 2009 Permit). Once in effect, the costs to comply with these new TMDL-related requirements will be in excess of $1,000.

(iii) Permit Subsection XVIII.B.7 imposes new requirements on the Permittees to participate in the development and implementation of additional Metals and Selenium TMDLs for the Newport Bay Watershed being developed by the Regional Board. The costs of these new TMDL-related programs will be in excess of $1,000.

(iv) Permit Subsection XVIII.B.8 imposes new requirements concerning the preparation of a Cooperative Watershed Program for Selenium TMDL for Newport Bay Watershed. The Cooperative Watershed Program must be submitted within 24 months of the date of adoption of the 2009 Permit or one month after the approval of the Selenium TMDL by the Office of Administrative Law. The costs of this new TMDL-related program will be in excess of $1,000.

(v) Permit Subsection XVIII.B.8 requires that, once the Cooperative Watershed Program for the Selenium TMDL for Newport Bay Watershed has been prepared and approved, that the Permittees must then implement this Program. The cost to implement this new TMDL-related, *i.e.*, to implement the Cooperative Watershed Program, will be in excess of $1,000.

(vi) Permit Subsection XVIII.C.1 impose new numeric effluent limits based on wasteload allocations from a Fecal Coliform/Bacteria TMDL for Newport Bay and San Diego Creek, as set forth in Tables 8A and 8B on pages 74-75 of the 2009 Permit. The costs to comply with this new TMDL-related program will be in excess of $1,000.

(vii) Permit Subsection XVIII.D.1 requires compliance with numeric effluent limits from waste load allocations from a TMDL for Diazinon and Chlorpyrifos for San Diego Creek and Chlorpyrifos for Newport Bay, as set forth in Tables 9A and 9B on page 76 of the 2009 Permit. The costs to comply with these new TMDL-related programs will be in excess of $1,000.

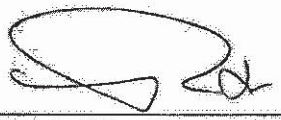
None of these TMDL-related programs are programs that were required as a part of the 2002 Permit and thus all are new programs under the 2009 Permit. The costs to be incurred by the Permittees for these various TMDL-related programs, as written into the 2009 Permit, collectively will be in the tens of millions of dollars and potentially in

excess of one hundred million dollars. Unless modified, each of these TMDL-related programs will continue throughout the life of the 2009 Permit, and indefinitely into the future as these TMDL programs will be carried forward into future iterations of the Municipal Permits.

7. I am informed and believe that there are no dedicated State, federal or regional funds that are or will be available to pay for any of these new programs/activities. I am not aware of any fee or tax which the City would have the discretion to impose under California law, to recover any portion of these new programs/activities. I further am informed and believe that the only available source to pay for these new programs/activities are and will be the City's General Fund.

Executed this 24th day of June, 2010 at Lake Forest, California.

I declare under penalty of perjury that the foregoing is true and correct.



Robert L. Woodings, P.E.
Director of Public Works/City Engineer

DECLARATION OF DAVID WEBB FOR CITY OF NEWPORT BEACH

DECLARATION OF DAVID WEBB ON BEHALF OF THE CITY OF NEWPORT BEACH IN SUPPORT OF TEST CLAIM

I, David Webb declare as follows:

1. I make this declaration based upon my own personal knowledge, except for matters set forth herein on information and belief, and as to those matters I believe them to be true, and if called upon to testify, I could and would competently testify to the matters set forth herein under oath.

2. I am employed by the City of Newport Beach (hereafter, "City") as the Deputy Public Works Director.

3. I have held my current position for approximately 2 ½ years. My duties include managing the Public Works Department and I oversee divisional supervisors in Engineering Services.

4. I have reviewed the California Regional Water Quality Control Board Santa Ana Region ("RWQCB"), Order No. R8-2009-0030 (NPDES No. CAS618030) issued by the Santa Ana RWQCB on May 22, 2009 (the "2009 Permit") and am familiar with the requirements of the Permit as it applies to the City.

5. I have also reviewed and I am familiar with the requirements of the Order No. R8-2002-0010 (NPDES CAS618030) issued by the Santa Ana RWQCB on January 18, 2002 (the "2002 Permit").

6. Based on my understanding of the requirements of the 2002 Permit and the requirements of the 2009 Permit, I believe the 2009 Permit requires the

Permittees to perform the following new activities, among others, that are not required by the 2002 Permit, and which are unique to local governmental entities:

(a) Municipal Inventories: Sections IX.1 and X of the 2009 Permit require the Permittee to maintain an inventory of industrial and commercial facilities/businesses within its jurisdiction, which must be maintained in a computer-based database system. Inclusion of a Geographical Information System (GIS) is required, with latitude/longitude (in decimals) or NAD83/WGS8439 compatible formatting. The cost to create, upgrade and/or maintain GIS capability to implement this mandated activity is in excess of $1,000. For Fiscal Year (FY) 2009-10, the approximate cost for this program is $8,290.00. For FY 2010-11, the approximate cost for this program is $8,700.00. The costs of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(b) Residential Program

(i) Common Interest Area (CIA)/Homeowner Association (HOA) Pilot Program: Subsection XI.4 of the 2009 Permit requires the Permittees to develop a pilot program to control pollutant discharges from common interest areas and areas managed by homeowner associations or management companies. Program activities to be funded include: evaluation of applicable regional programs and studies to encourage efficient water use and to minimize runoff, such as those developed by the Municipal Water District of Orange County (MWDOC) and the Irvine Ranch Water District (IRWD) and development of a pilot program to include design and dissemination of educational and outreach

materials, determination of baseline conditions and measurable target outcomes, and assessment of performance. The Permittees will collectively retain a consultant to perform this mandated activity in FY 2010-11. The cost of developing the pilot HOA program is estimated to be $40,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with the mandated activities in FY 2010-11 is detailed in the enclosed city cost-share summary.

(c) Public Education and Outreach

(i) Public Awareness Survey: Subsection XIII.1 of the 2009 Permit requires the Permittees to complete a public awareness survey to determine the effectiveness of the current public and business education strategy and any need for changes to the current multimedia public education efforts. The Permittees collectively retained a consultant to perform this mandated activity in FY 2009-10. The cost of developing and conducting this survey and analyzing the results for the city stakeholders was $80,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with the mandated activities in FY 2009-10 is detailed in the enclosed city cost-share summary.

(ii) Workshops: Subsection XIII.4 of the 2009 Permit requires the Permittees to conduct sector-specific workshops, individually or on a regional basis by July 1, 2010 and on an annual basis thereafter. The target sectors include

manufacturing facilities; mobile service industry; commercial, distribution and retail sales industry; residential/commercial landscape construction and services industry; residential and commercial construction industry; and residential and community activities. The Permittees collectively retained County staff to assist with these mandated activities. The cost of the workshops in FY 2009-10 was $9,000. The cost of the workshops in FY 2010-11 is estimated to be $10,000. The costs of this new program will continue into the future throughout the 2009 Permit and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit. Each Permittee's share of these mandated costs is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. There will be additional costs incurred by the City in excess of $1,000 to cover staff attendance at the workshops and other related program participation.

(iii) Public Participation: Subsection XIII.7 of the 2009 Permit requires the Permittees to develop and implement a mechanism for public participation in the updating and implementation of the Drainage Area Management Plans, monitoring plans, Water Quality Management Plan guidance and Fact Sheets for various activities. The public shall be informed of the availability of these documents through public notices in local newspapers, County and/or city websites, local libraries/city halls and/or courthouses. The Permittees collectively retained County staff to assist with these mandated activities. The cost to develop

and implement a stakeholder advisory process in FY 2009-10 was approximately $2,500 and is expected to be $2,500 in FY 2010-11. The costs of this new program will continue into the future throughout the 2009 Permit to continue to notify the public of new program developments and documents. Each Permittee's share of these mandated costs is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. There will be additional costs incurred by the City in excess of $1,000 to cover staff attendance at stakeholder meetings and other related program participation.

(d) New/Revised Development Programs and Standards

(i) Low Impact Development (LID) and the Model Water Quality Management Plan (WQMP): Subsection XII.C of the 2009 Permit requires the Permittees to incorporate LID principals and structural features into Public Agency Priority Development Projects and in other instances incorporate United States Environmental Protection Agency (US EPA) Guidance entitled, *"Managing Wet Weather with Green Infrastructure: Green Streets."* These include certain road, drainage facility, public utility, linear, and other projects which have constraints that, in some cases, prevent compliance. The Permittees collectively retained a consultant team to assist with developing a public agency project element within the Model WQMP in FY 2009-10. The cost of this work in FY 2009-10 was $60,000, and continuation of this work in FY 2010-11 is approximated to be $75,000. Each Permittee's share of this mandated cost is

based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. The cost to develop public agency WQMPs for road, drainage facility, public utility, linear, and other projects with incorporation of LID principals to implement this mandated activity is in excess of $1,000. For FY 2009-10, the approximate cost for this program is $14,990.00. For FY 2010-11, the approximate cost for this program is $220,000.00. The costs of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(ii) Hydrologic Conditions of Concern ("HCOC"): Subsection XII.D of the 2009 Permit requires the Permittees to address the impact of urbanization on downstream hydrology. Subsection XII.D.1 requires each Priority Development Project to ascertain the impact of the development on the site's hydrologic regime based on the two-year frequency storm event and include the findings in the WQMP. The cost to assess HCOCs for public agency projects to comply with this mandated activity is in excess of $1,000. The cost of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(e) Total Maximum Daily Loads (TMDLs): Section XVIII of the 2009 Permit contains several new programs involving what are known as "Total Maximum

Daily Loads" or "TMDLs" as follows:

(i) Permit Subsections XVIII.B.1 through B.4 requires compliance with a series of new numeric effluent limits based on waste load allocations within EPA-promulgated Toxic Pollutant TMDLs for San Diego Creek and Newport Bay. These new program requirements all involve the imposition of numeric effluent limits from waste load allocations from these TMDLs, as set forth in Tables 1 A/B/C, Table 2 A/B/C/D and Table 3 on pages 68 to 71 of the 2009 Permit. The costs to comply with each of these TMDL-related programs are in excess of $1,000.

(ii) Permit Subsection XVIII.B.5 imposes new TMDL-related requirements that will take effect upon adoption by State Board and the Office of Administrative Law ("OAL"), and concern compliance with numeric limits taken from wasteload allocations contained in the Regional Board adopted TMDLs for Organochlorine Compounds for Newport Bay and San Diego Creek (as set forth in Table 4 on page 71 of the 2009 Permit). Once in effect, the costs to comply with these new TMDL-related requirements will be in excess of $1,000.

(iii) Permit Subsection XVIII.B.7 imposes new requirements on the Permittees to participate in the development and implementation of additional Metals and Selenium TMDLs for the Newport Bay Watershed being developed by the Regional Board. The costs of these new TMDL-related programs will be in excess of $1,000.

(iv) Permit Subsection XVIII.B.8 imposes new requirements concerning the preparation of a Cooperative Watershed Program for Selenium

TMDL for Newport Bay Watershed. The Cooperative Watershed Program must be submitted within 24 months of the date of adoption of the 2009 Permit or one month after the approval of the Selenium TMDL by the Office of Administrative Law. The costs of this new TMDL-related program will be in excess of $1,000.

(v) Permit Subsection XVIII.B.8 requires that, once the Cooperative Watershed Program for Selenium TMDL for Newport Bay Watershed has been prepared and approved, that the Permittees must then implement this Program. The cost to implement this new TMDL-related, *i.e.*, to implement the Cooperative Watershed Program, will be in excess of $1,000.

(vi) Permit Subsection XVIII.C.1 impose new numeric effluent limits based on wasteload allocations from a Fecal Coliform/Bacteria TMDL for Newport Bay and San Diego Creek, as set forth in Tables 8A and 8B on pages 74-75 of the 2009 Permit. The costs to comply with this new TMDL-related program will be in excess of $1,000.

(vii) Permit Subsection XVIII.D.1 requires compliance with numeric effluent limits from waste load allocations from a TMDL for Diazinon and Chlorpyrifos for San Diego Creek and Chlorpyrifos for Newport Bay, as set forth in Tables 9A and 9B on page 76 of the 2009 Permit. The costs to comply with these new TMDL-related programs will be in excess of $1,000.

None of these TMDL-related programs are programs that were required as a part of the 2002 Permit and thus all are new programs under the 2009 Permit. The costs to be incurred by the Permittees for these various TMDL-related programs, as written into the 2009 Permit, collectively will be in the tens of

millions of dollars and potentially in excess of one hundred million dollars. Unless modified, each of these TMDL-related programs will continue throughout the life of the 2009 Permit, and indefinitely into the future as these TMDL programs will be carried forward into future iterations of the Municipal Permits.

7. I am informed and believe that there are no dedicated State, federal or regional funds that are or will be available to pay for any of these new programs/activities. I am not aware of any fee or tax which the City would have the discretion to impose under California law, to recover any portion of these new programs/activities. I further am informed and believe that the only available source to pay for these new programs/activities are and will be the City's General Fund.

Executed this 24th day of June, 2010 at Newport Beach, California.

I declare under penalty of perjury that the foregoing is true and correct.

David Webb
Deputy Public Works Director

DECLARATION OF ROBERT MAKOWSKI FOR CITY OF PLACENTIA.

DECLARATION OF ROBERT MAKOWSKI ON BEHALF OF THE CITY OF PLACENTIA IN SUPPORT OF TEST CLAIM

I, Robert Makowski, declare as follows:

1. I make this declaration based upon my own personal knowledge, except for matters set forth herein on information and belief, and as to those matters I believe them to be true, and if called upon to testify, I could and would competently testify to the matters set forth herein under oath.

2. I am employed by the City of Placentia (hereafter, "City") as the Environmental Compliance Officer.

3. I have held my current position for approximately two years. My duties include managing the Water Quality Department.

4. I have reviewed the California Regional Water Quality Control Board Santa Ana Region ("RWQCB"), Order No. R8-2009-0030 (NPDES No. CAS618030) issued by the Santa Ana RWQCB on May 22, 2009 (the "2009 Permit") and am familiar with the requirements of the Permit as it applies to the City.

5. I have also reviewed and I am familiar with the requirements of the Order No. R8-2002-0010 (NPDES CAS618030) issued by the Santa Ana RWQCB on January 18, 2002 (the "2002 Permit").

6. Based on my understanding of the requirements of the 2002 Permit and the requirements of the 2009 Permit, I believe the 2009 Permit requires the Permittees to perform the following new activities, among others, that are not

required by the 2002 Permit, and which are unique to local governmental entities:

(a) Municipal Inventories: Sections IX.1 and X of the 2009 Permit require the Permittee to maintain an inventory of industrial and commercial facilities/businesses within its jurisdiction, which must be maintained in a computer-based database system. Inclusion of a Geographical Information System (GIS) is required, with latitude/longitude (in decimals) or NAD83/WGS8439 compatible formatting. The cost to create, upgrade and/or maintain GIS capability to implement this mandated activity is in excess of $1,000. For Fiscal Year (FY) 2009-10, the approximate cost for this program is $16,000.00. For FY 2010-11, the approximate cost for this program is $13,500.00. The costs of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(b) Residential Program

(i) Common Interest Area (CIA)/Homeowner Association (HOA) Pilot Program: Subsection XI.4 of the 2009 Permit requires the Permittees to develop a pilot program to control pollutant discharges from common interest areas and areas managed by homeowner associations or management companies. Program activities to be funded include: evaluation of applicable regional programs and studies to encourage efficient water use and to minimize runoff, such as those developed by the Municipal Water District of Orange County (MWDOC) and the Irvine Ranch Water District (IRWD) and development of a pilot program to include design and dissemination of educational and outreach materials, determination of baseline conditions and measurable target outcomes,

and assessment of performance. The Permittees will collectively retain a consultant to perform this mandated activity in FY 2010-11. The cost of developing the pilot HOA program is estimated to be $40,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with the mandated activities in FY 2010-11 is detailed in the enclosed city cost-share summary.

(c) Public Education and Outreach

(i) Public Awareness Survey: Subsection XIII.1 of the 2009 Permit requires the Permittees to complete a public awareness survey to determine the effectiveness of the current public and business education strategy and any need for changes to the current multimedia public education efforts. The Permittees collectively retained a consultant to perform this mandated activity in FY 2009-10. The cost of developing and conducting this survey and analyzing the results for the city stakeholders was $80,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with the mandated activities in FY 2009-10 is detailed in the enclosed city cost-share summary.

(ii) Workshops: Subsection XIII.4 of the 2009 Permit requires the Permittees to conduct sector-specific workshops, individually or on a regional basis by July 1, 2010 and on an annual basis thereafter. The target sectors include manufacturing facilities; mobile service industry; commercial, distribution and

retail sales industry; residential/commercial landscape construction and services industry; residential and commercial construction industry; and residential and community activities. The Permittees collectively retained County staff to assist with these mandated activities. The cost of the workshops in FY 2009-10 was $9,000. The cost of the workshops in FY 2010-11 is estimated to be $10,000. The costs of this new program will continue into the future throughout the 2009 Permit and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit. Each Permittee's share of these mandated costs is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. There will be additional costs incurred by the City in excess of $1,000 to cover staff attendance at the workshops and other related program participation.

(iii) Public Participation: Subsection XIII.7 of the 2009 Permit requires the Permittees to develop and implement a mechanism for public participation in the updating and implementation of the Drainage Area Management Plans, monitoring plans, Water Quality Management Plan guidance and Fact Sheets for various activities. The public shall be informed of the availability of these documents through public notices in local newspapers, County and/or city websites, local libraries/city halls and/or courthouses. The Permittees collectively retained County staff to assist with these mandated activities. The cost to develop and implement a stakeholder advisory process in FY 2009-10 was approximately

$2,500 and is expected to be $2,500 in FY 2010-11. The costs of this new program will continue into the future throughout the 2009 Permit to continue to notify the public of new program developments and documents. Each Permittee's share of these mandated costs is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. There will be additional costs incurred by the City in excess of $1,000 to cover staff attendance at stakeholder meetings and other related program participation.

(d) New/Revised Development Programs and Standards

(i) Low Impact Development (LID) and the Model Water Quality Management Plan (WQMP): Subsection XII.C of the 2009 Permit requires the Permittees to incorporate LID principals and structural features into Public Agency Priority Development Projects and in other instances incorporate United States Environmental Protection Agency (US EPA) Guidance entitled, *"Managing Wet Weather with Green Infrastructure: Green Streets."* These include certain road, drainage facility, public utility, linear, and other projects which have constraints that, in some cases, prevent compliance. The Permittees collectively retained a consultant team to assist with developing a public agency project element within the Model WQMP in FY 2009-10. The cost of this work in FY 2009-10 was $60,000, and continuation of this work in FY 2010-11 is approximated to be $75,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The

City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. The cost to develop public agency WQMPs for road, drainage facility, public utility, linear, and other projects with incorporation of LID principals to implement this mandated activity is in excess of $1,000. For FY 2009-10, the approximate cost for this program is $32,500.00 For FY 2010-11, the approximate cost for this program is $37,500.00 The costs of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(ii) Hydrologic Conditions of Concern ("HCOC"): Subsection XII.D of the 2009 Permit requires the Permittees to address the impact of urbanization on downstream hydrology. Subsection XII.D.1 requires each Priority Development Project to ascertain the impact of the development on the site's hydrologic regime based on the two-year frequency storm event and include the findings in the WQMP. The cost to assess HCOCs for public agency projects to comply with this mandated activity is in excess of $1,000. The cost of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(e) Total Maximum Daily Loads (TMDLs): Section XVIII of the 2009 Permit contains a new program involving what is known as "Total Maximum Daily Loads" or "TMDLs" as follows:

(i) Permit Subsection XVIII.B.9 requires the development and implementation of a Constituent Specific Source Control Plan (including a monitoring program) in connection with a Metals TMDL for Coyote Creek and San Gabriel River. The Constituent Specific Source Control Plan is required to be designed and implemented to ensure compliance with specific numeric effluent limits taken from the wasteload allocations set forth the Metals TMDL for Coyote Creek and San Gabriel River, as set forth in Table 6 on page 73 of the 2009 Permit. The costs to comply with this new TMDL-related program will be in excess of $1,000.

This TMDL-related program was not required as a part of the 2002 Permit and thus is a new program under the 2009 Permit. Unless modified, this TMDL-related program will continue throughout the life of the 2009 Permit, and indefinitely into the future as this TMDL program will be carried forward into future iterations of the Municipal Permits.

7. I am informed and believe that there are no dedicated State, federal or regional funds that are or will be available to pay for any of these new programs/activities. I am not aware of any fee or tax which the City would have the discretion to impose under California law, to recover any portion of these new programs/activities. I further am informed and believe that the only available source to pay for these new programs/activities are and will be the City's General Fund. Executed this twenty third day of June, 2010 at Placentia, California.

I declare under penalty of perjury that the foregoing is true and correct.

R. H. Mak

Robert Makowski Environmental Compliance Officer

DECLARATION OF MICHAEL HO, CITY ENGINEER FOR CITY OF SEAL BEACH.

DECLARATION OF MICHAEL HO, CITY ENGINEER ON BEHALF OF THE CITY OF SEAL BEACH IN SUPPORT OF TEST CLAIM

I, Michael Ho, declare as follows:

1. I make this declaration based upon my own personal knowledge, except for matters set forth herein on information and belief, and as to those matters I believe them to be true, and if called upon to testify, I could and would competently testify to the matters set forth herein under oath.

2. I am employed by the City of Seal Beach (hereafter, "City") as the City Engineer.

3. I have held my current position for approximately three (3). My duties include managing the Public Works Department and I oversee divisional supervisors in Engineering.

4. I have reviewed the California Regional Water Quality Control Board Santa Ana Region ("RWQCB"), Order No. R8-2009-0030 (NPDES No. CAS618030) issued by the Santa Ana RWQCB on May 22, 2009 (the "2009 Permit") and am familiar with the requirements of the Permit as it applies to the City.

5. I have also reviewed and I am familiar with the requirements of the Order No. R8-2002-0010 (NPDES CAS618030) issued by the Santa Ana RWQCB on January 18, 2002 (the "2002 Permit").

6. Based on my understanding of the requirements of the 2002 Permit and the requirements of the 2009 Permit, I believe the 2009 Permit requires the Permittees to perform the following new activities, among others, that are not required by the 2002 Permit, and which are unique to local governmental entities:

(a) Municipal Inventories: Sections IX.1 and X of the 2009 Permit require the Permittee to maintain an inventory of industrial and commercial facilities/businesses within its jurisdiction, which must be maintained in a computer-based database system. Inclusion of a Geographical Information System (GIS) is required, with latitude/longitude (in decimals) or NAD83/WGS8439 compatible formatting. The cost to create, upgrade and/or maintain GIS capability to implement this mandated activity is in excess of $1,000. For Fiscal Year (FY) 2009-10, the approximate cost for this program is $3,548. For FY 2010-11, the approximate cost for this program is $3,850. The costs of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(b) Residential Program

(i) Common Interest Area (CIA)/Homeowner Association (HOA) Pilot Program: Subsection XI.4 of the 2009 Permit requires the Permittees to develop a pilot program to control pollutant discharges from common interest areas and areas managed by homeowner associations or management companies. Program activities to be funded include:

evaluation of applicable regional programs and studies to encourage efficient water use and to minimize runoff, such as those developed by the Municipal Water District of Orange County (MWDOC) and the Irvine Ranch Water District (IRWD) and development of a pilot program to include design and dissemination of educational and outreach materials, determination of baseline conditions and measurable target outcomes, and assessment of performance. The Permittees will collectively retain a consultant to perform this mandated activity in FY 2010-11. The cost of developing the pilot HOA program is estimated to be $40,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with the mandated activities in FY 2010-11 is detailed in the enclosed city cost-share summary.

(c) Public Education and Outreach

(i) Public Awareness Survey: Subsection XIII.1 of the 2009 Permit requires the Permittees to complete a public awareness survey to determine the effectiveness of the current public and business education strategy and any need for changes to the current multimedia public education efforts. The Permittees collectively retained a consultant to perform this mandated activity in FY 2009-10. The cost of developing and conducting this survey and analyzing the results for the city stakeholders was $80,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The City's

proportional share of the budgeted costs for complying with the mandated activities in FY 2009-10 is detailed in the enclosed city cost-share summary.

(ii) Workshops: Subsection XIII.4 of the 2009 Permit requires the Permittees to conduct sector-specific workshops, individually or on a regional basis by July 1, 2010 and on an annual basis thereafter. The target sectors include manufacturing facilities; mobile service industry; commercial, distribution and retail sales industry; residential/commercial landscape construction and services industry; residential and commercial construction industry; and residential and community activities. The Permittees collectively retained County staff to assist with these mandated activities. The cost of the workshops in FY 2009-10 was $9,000. The cost of the workshops in FY 2010-11 is estimated to be $10,000. The costs of this new program will continue into the future throughout the 2009 Permit and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit. Each Permittee's share of these mandated costs is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. There will be additional costs incurred by the City in excess of $1,000 to cover staff attendance at the workshops and other related program participation.

(iii) Public Participation: Subsection XIII.7 of the 2009 Permit requires the Permittees to develop and implement a mechanism for public participation in the updating and implementation of the Drainage Area Management Plans, monitoring plans, Water Quality Management Plan guidance and Fact Sheets for various activities. The public shall be informed of the availability of these documents through public notices in local newspapers, County and/or city websites, local libraries/city halls and/or courthouses. The Permittees collectively retained County staff to assist with these mandated activities. The cost to develop and implement a stakeholder advisory process in FY 2009-10 was approximately $2,500 and is expected to be $2,500 in FY 2010-11. The costs of this new program will continue into the future throughout the 2009 Permit to continue to notify the public of new program developments and documents. Each Permittee's share of these mandated costs is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. There will be additional costs incurred by the City in excess of $1,000 to cover staff attendance at stakeholder meetings and other related program participation.

(d) New/Revised Development Programs and Standards

(i) Low Impact Development (LID) and the Model Water Quality Management Plan (WQMP): Subsection XII.C of the 2009 Permit

requires the Permittees to incorporate LID principals and structural features into Public Agency Priority Development Projects and in other instances incorporate United States Environmental Protection Agency (US EPA) Guidance entitled, *"Managing Wet Weather with Green Infrastructure: Green Streets."* These include certain road, drainage facility, public utility, linear, and other projects which have constraints that, in some cases, prevent compliance. The Permittees collectively retained a consultant team to assist with developing a public agency project element within the Model WQMP in FY 2009-10. The cost of this work in FY 2009-10 was $60,000, and continuation of this work in FY 2010-11 is approximated to be $75,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. The cost to develop public agency WQMPs for road, drainage facility, public utility, linear, and other projects with incorporation of LID principals to implement this mandated activity is in excess of $1,000. For FY 2009-10, the approximate cost for this program is $13,540. For FY 2010-11, the approximate cost for this program is $14,176. The costs of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(ii) Hydrologic Conditions of Concern ("HCOC"): Subsection XII.D of the 2009 Permit requires the Permittees to address the impact of urbanization on downstream hydrology. Subsection XII.D.1 requires each Priority Development Project to ascertain the impact of the development on the site's hydrologic regime based on the two-year frequency storm event and include the findings in the WQMP. The cost to assess HCOCs for public agency projects to comply with this mandated activity is in excess of $1,000. The cost of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(e) Total Maximum Daily Loads (TMDLs): Section XVIII of the 2009 Permit contains a new program involving what is known as "Total Maximum Daily Loads" or "TMDLs" as follows:

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This TMDL-related program was not required as a part of the 2002 Permit and thus is a new program under the 2009 Permit. Unless modified, this TMDL-related program will continue throughout the life of the 2009 Permit, and indefinitely into the future as this TMDL program will be carried forward into future iterations of the Municipal Permits.

7. I am informed and believe that there are no dedicated State, federal or regional funds that are or will be available to pay for any of these new programs/activities. I am not aware of any fee or tax which the City would have the discretion to impose under California law, to recover any portion of these new programs/activities. I further am informed and believe that the only available source to pay for these new programs/activities are and will be the City's General Fund.

Executed this 24th day of June, 2010 at Seal Beach, California.

I declare under penalty of perjury that the foregoing is true and correct.

Michael Ho
City Engineer

DECLARATION OF LORI SASSOON FOR CITY OF VILLA PARK.

DECLARATION OF LORI SASSOON ON BEHALF OF THE CITY OF VILLA PARK IN SUPPORT OF TEST CLAIM

I, Lori Sassoon, declare as follows:

1. I make this declaration based upon my own personal knowledge, except for matters set forth herein on information and belief, and as to those matters I believe them to be true, and if called upon to testify, I could and would competently testify to the matters set forth herein under oath.

2. I am employed by the City of Villa Park (hereafter, "City") as the City Manager.

3. I have held my current position for approximately one year. My duties include managing the Engineer and Planning Departments.

4. I have reviewed the California Regional Water Quality Control Board Santa Ana Region ("RWQCB"), Order No. R8-2009-0030 (NPDES No. CAS618030) issued by the Santa Ana RWQCB on May 22, 2009 (the "2009 Permit") and am familiar with the requirements of the Permit as it applies to the City.

5. I have also reviewed and I am familiar with the requirements of the Order No. R8-2002-0010 (NPDES CAS618030) issued by the Santa Ana RWQCB on January 18, 2002 (the "2002 Permit").

6. Based on my understanding of the requirements of the 2002

Permit and the requirements of the 2009 Permit, I believe the 2009 Permit requires the Permittees to perform the following new activities, among others, that are not required by the 2002 Permit, and which are unique to local governmental entities:

(a) Municipal Inventories: Sections IX.1 and X of the 2009 Permit require the Permittee to maintain an inventory of industrial and commercial facilities/businesses within its jurisdiction, which must be maintained in a computer-based database system. Inclusion of a Geographical Information System (GIS) is required, with latitude/longitude (in decimals) or NAD83/WGS8439 compatible formatting. The cost to create, upgrade and/or maintain GIS capability to implement this mandated activity is in excess of $1,000. For Fiscal Year (FY) 2009-10, the approximate cost for this program is $4,000. For FY 2010-11, the approximate cost for this program is $4,000. The costs of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(b) Residential Program

(i) Common Interest Area (CIA)/Homeowner Association (HOA) Pilot Program: Subsection XI.4 of the 2009 Permit requires the Permittees to develop a pilot program to control pollutant discharges from common interest areas and areas managed by homeowner associations or management companies. Program activities to be funded include: evaluation of applicable regional programs and studies to encourage

efficient water use and to minimize runoff, such as those developed by the Municipal Water District of Orange County (MWDOC) and the Irvine Ranch Water District (IRWD) and development of a pilot program to include design and dissemination of educational and outreach materials, determination of baseline conditions and measurable target outcomes, and assessment of performance. The Permittees will collectively retain a consultant to perform this mandated activity in FY 2010-11. The cost of developing the pilot HOA program is estimated to be $40,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with the mandated activities in FY 2010-11 is detailed in the enclosed city cost-share summary.

(c) Public Education and Outreach

(i) Public Awareness Survey: Subsection XIII.1 of the 2009 Permit requires the Permittees to complete a public awareness survey to determine the effectiveness of the current public and business education strategy and any need for changes to the current multimedia public education efforts. The Permittees collectively retained a consultant to perform this mandated activity in FY 2009-10. The cost of developing and conducting this survey and analyzing the results for the city stakeholders was $80,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with the mandated

activities in FY 2009-10 is detailed in the enclosed city cost-share summary.

(ii) Workshops: Subsection XIII.4 of the 2009 Permit requires the Permittees to conduct sector-specific workshops, individually or on a regional basis by July 1, 2010 and on an annual basis thereafter. The target sectors include manufacturing facilities; mobile service industry; commercial, distribution and retail sales industry; residential/commercial landscape construction and services industry; residential and commercial construction industry; and residential and community activities. The Permittees collectively retained County staff to assist with these mandated activities. The cost of the workshops in FY 2009-10 was $9,000. The cost of the workshops in FY 2010-11 is estimated to be $10,000. The costs of this new program will continue into the future throughout the 2009 Permit and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit. Each Permittee's share of these mandated costs is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. There will be additional costs incurred by the City in excess of $1,000 to cover staff attendance at the workshops and other related program participation.

(iii) Public Participation: Subsection XIII.7 of the 2009 Permit requires the Permittees to develop and implement a mechanism for public

participation in the updating and implementation of the Drainage Area Management Plans, monitoring plans, Water Quality Management Plan guidance and Fact Sheets for various activities. The public shall be informed of the availability of these documents through public notices in local newspapers, County and/or city websites, local libraries/city halls and/or courthouses. The Permittees collectively retained County staff to assist with these mandated activities. The cost to develop and implement a stakeholder advisory process in FY 2009-10 was approximately $2,500 and is expected to be $2,500 in FY 2010-11. The costs of this new program will continue into the future throughout the 2009 Permit to continue to notify the public of new program developments and documents. Each Permittee's share of these mandated costs is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. There will be additional costs incurred by the City in excess of $1,000 to cover staff attendance at stakeholder meetings and other related program participation.

(d) New/Revised Development Programs and Standards

(i) Low Impact Development (LID) and the Model Water Quality Management Plan (WQMP): Subsection XII.C of the 2009 Permit requires the Permittees to incorporate LID principals and structural features into Public Agency Priority Development Projects and in other

instances incorporate United States Environmental Protection Agency (US EPA) Guidance entitled, *"Managing Wet Weather with Green Infrastructure: Green Streets."* These include certain road, drainage facility, public utility, linear, and other projects which have constraints that, in some cases, prevent compliance. The Permittees collectively retained a consultant team to assist with developing a public agency project element within the Model WQMP in FY 2009-10. The cost of this work in FY 2009-10 was $60,000, and continuation of this work in FY 2010-11 is approximated to be $75,000. Each Permittee's share of this mandated cost is based on a formula set forth in the enclosed Implementation Agreement. The City's proportional share of the budgeted costs for complying with these mandated activities for FY 2009-10 and FY 2010-11 is detailed in the enclosed city cost-share summary. The cost to develop public agency WQMPs for road, drainage facility, public utility, linear, and other projects with incorporation of LID principals to implement this mandated activity is in excess of $1,000. For FY 2009-10, the approximate cost for this program is $10,000. For FY 2010-11, the approximate cost for this program is $10,000. The costs of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

(ii) Hydrologic Conditions of Concern ("HCOC"): Subsection XII.D of the 2009 Permit requires the Permittees to address the impact of

urbanization on downstream hydrology. Subsection XII.D.1 requires each Priority Development Project to ascertain the impact of the development on the site's hydrologic regime based on the two-year frequency storm event and include the findings in the WQMP. The cost to assess HCOCs for public agency projects to comply with this mandated activity is in excess of $1,000. The cost of this new mandated activity will continue into the future throughout this 2009 Permit, and indefinitely thereafter given that this program will likely be carried forward into all future iterations of the Permit.

7. I am informed and believe that there are no dedicated State, federal or regional funds that are or will be available to pay for any of these new programs/activities. I am not aware of any fee or tax which the City would have the discretion to impose under California law, to recover any portion of these new programs/activities. I further am informed and believe that the only available source to pay for these new programs/activities are and will be the City's General Fund.

Executed this 28th day of June, 2010 at 10:30 am, California.

I declare under penalty of perjury that the foregoing is true and correct.

Lori Sassoon
City Manager

SECTION 7 –

DOCUMENTATION

IN SUPPORT OF TEST CLAIMS IN RE SANTA ANA RWQCB

ORDER NO. R8-2009-0030

(NPDES NO. CAS618030)

Volume I

EXECUTIVE ORDER AND RELATED

DOCUMENTATION

INDEX TO SECTION 7 DOCUMENTATION

VOLUME I - EXECUTIVE ORDER AND RELATED DOCUMENTATION

TAB "1"

State of California
California Regional Water Quality Control Board
Santa Ana Region

ORDER NO. R8-2009-0030
NPDES No. CAS618030

Waste Discharge Requirements
for
the County of Orange, Orange County Flood Control District
and
The Incorporated Cities of Orange County within the Santa Ana Region
Areawide Urban Storm Water Runoff
Orange County

FINDINGS

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter Regional Board) finds that:

A. REGULATORY BASIS

1. The 1987 amendments to the Clean Water Act (CWA) added Section 402(p) (USC §1342(p)) establishing a framework for regulating municipal and industrial (including construction) storm water discharges under the National Pollutant Discharge Elimination System (NPDES) permit. Section 402(p) of the CWA requires NPDES permits for storm water discharges from municipal separate storm sewer systems[1] (storm drains or MS4s) as well as other designated storm water discharges that are considered significant contributors of pollutants to waters of the United States (waters of the US). On November 16, 1990, the United States Environmental Protection Agency (hereinafter EPA) amended its NPDES permit regulations to include permit application requirements for storm water discharges. These regulations are codified in Code of Federal Regulations, Title 40, Parts 122, 123 and 124 (40 CFR Parts 122, 123 & 124).

2. This order is based on Section 402(p) of the CWA; 40 CFR Parts 122, 123, and 124; Porter-Cologne Water Quality Control Act (Division 7 of the California Water Code or CWC, commencing with Section 13000); all applicable provisions of statewide Water Quality Control Plans and Policies adopted by the State Water Resources Control Board (State Board); the Water Quality Control Plan for the Santa Ana River Basin (Basin Plan); the California Toxics Rule (CTR); and the California Toxics Rule Implementation Plan. A revised Basin Plan was adopted by the Regional Board and became effective on January 24, 1995. The Basin Plan contains water quality objectives and beneficial uses for water bodies in the Santa Ana Region. Under the CWA, the beneficial uses and the water quality objectives to protect those beneficial uses are collectively referred to as water quality standards. The Basin Plan also incorporates by reference all State Board water quality control

[1] A municipal separate storm sewer **system** (MS4) is any conveyance or a system of conveyances designed to collect and/or transport storm water, such as, storm drains, manmade channels, ditches, roads w/drainage systems, catch basins, curbs, gutters, etc., which is not part of a Publicly Owned Treatment Works (i.e., not a combined sewer).

plans and policies, including the 1990 Water Quality Control Plan for Ocean Waters of California (Ocean Plan).

3. The requirements contained in this order are necessary to protect water quality standards of the receiving waters and to implement the plans and policies described in the above finding. These plans and policies contain numeric and narrative water quality standards for the water bodies in this Region. In accordance with Section 402(p)(2)(B)(iii) of CWA and its implementing regulations, this order requires the permittees to develop and implement programs and policies necessary to reduce the discharge of pollutants in urban storm water runoff to waters of the US to the maximum extent practicable (MEP)[2]. The legislative history and the preamble to the federal storm water regulations (40 CFR Parts 122, 123 and 124) indicate that the Congress and the EPA were aware of the difficulties in regulating urban storm water runoff solely through traditional end-of-pipe treatment. Consistent with the CWA, it is the Regional Board's intent that this order require the implementation of best management practices (BMPs)[3] to reduce to the maximum extent practicable, the discharge of pollutants in urban storm water from the MS4s in order to support attainment of water quality standards. This order, therefore, includes Receiving Water Limitations[4] based upon water quality objectives, and requires implementation of control measures to protect the beneficial uses. It also prohibits the creation of nuisance and requires the reduction of water quality impairment in receiving waters with an ultimate goal of achieving water quality objectives of the receiving waters.

4. This order is consistent with recent court decisions and precedential orders adopted by the State Board related to municipal storm water NPDES permits. These precedential State Board orders include: Orders No. 99-05, WQ 2001-15 and WQO 2002-0014.

5. This order does not constitute an unfunded mandate subject to subvention under Article XIII.B, Section (6) of the California Constitution for several reasons, including the following:

    a) This order implements federally mandated requirements under Clean Water Act Section 402(p)(3)(B). (33 USC § 1342(p)(3)(B)).

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[2] MEP is not defined in the CWA; it refers to management practices, control techniques, and system, design and engineering methods for the control of pollutants taking into account considerations of synergistic, additive, and competing factors, including, but not limited to, gravity of the problem, technical feasibility, fiscal feasibility, public health risks, societal concerns, and social benefits.

[3] Best Management Practices (BMPs) are programs and policies, including structural controls where appropriate, that are implemented to control the discharge of pollutants.

[4] Receiving Water Limitations are requirements included in the orders issued by the Regional Board to assure that the regulated discharge does not violate water quality standards established in the Basin Plan at the point of discharge to waters of the US or the State.

b) The permittees' obligation under this order are similar to, and in many respects less stringent than, the obligations of non-governmental dischargers who are issued NPDES permits for storm water discharges.

c) The permittees have the authority to levy service charges, fees, or assessments to pay for compliance with this order, where voter approval is needed, the permittees should strive to gain voter approval[5].

d) The permittees requested permit coverage in lieu of compliance with the complete prohibition against the discharge of pollutants contained in federal Clean Water Act Section 301, subdivision (a). (33 USC § 1311(a)).

B. REGULATED ENTITIES (PERMITTEES OR DISCHARGERS)

6. On July 22, 2006, the County of Orange, Orange County Flood Control District (OCFCD) and the incorporated cities of Anaheim, Brea, Buena Park, Costa Mesa, Cypress, Fountain Valley, Fullerton, Garden Grove, Huntington Beach, Irvine, Laguna Hills, Laguna Woods, La Habra, La Palma, Lake Forest, Los Alamitos, Newport Beach, Orange, Placentia, Santa Ana, Seal Beach, Stanton, Tustin, Villa Park, Westminster, and Yorba Linda (hereinafter collectively referred to as permittees or dischargers), submitted NPDES Application No. CAS618030 and a Report of Waste Discharge for reissuance of their areawide urban storm water permit. In order to more effectively carry out the requirements of this order, the permittees have agreed that the County of Orange will continue as principal permittee and the OCFCD and the incorporated cities will continue as co-permittees. Certain portions of the cities of Laguna Hills, Laguna Woods and Lake Forest are within the San Diego Regional Board's jurisdiction. As such, these cities are also regulated under urban storm water permit issued by the San Diego Regional Board.

7. The permittees fall into one of the following categories: (1) a medium or large municipality that services a population of greater than 100,000 or 250,000 respectively; or, (2) a small municipality that is interrelated to a medium or large municipality. Under Section 402(p) of the Clean Water Act, these dischargers (permittees) are required to obtain coverage under an NPDES permit for storm water runoff from their jurisdictions.

C. REGULATED DISCHARGES

8. This order is intended to regulate the discharge of pollutants in urban storm water runoff from anthropogenic (generated from human activities) sources and/or activities within the jurisdiction and control of the permittees and is not intended to address background or naturally occurring pollutants or flows.

9. The permittees own and operate storm drains, including flood control facilities. Some of the natural channels, streambeds and other drainage facilities that are generally considered as waters of the US have been converted to flood control

[5] For example, the City of Santa Cruz voted to raise property taxes to fund the storm water program at the November 4, 2008 election (see: http://www.santacruzsentinel.com/localnews/ci_10904561).

facilities. The permittees have established legal authority to control discharges into these systems that they own, operate and/or regulate. As owners and/or operators of the MS4 systems, the permittees are responsible for discharges into their systems that they do not prohibit or control (except where they lack jurisdiction; see A.10 below). The discharge of pollutants into the MS4s may cause or contribute to, or threaten to cause or contribute to, a condition of pollution in receiving waters. Federal regulations, 40 CFR 122.26(d)(2)(i), require the permittees to control the discharge of pollutants into the MS4s to the maximum extent practicable.

10. The permittees may lack legal jurisdiction over urban runoff into their systems from some state and federal facilities, utilities and special districts, Native American tribal lands, waste water management agencies and other point and non-point source discharges otherwise permitted by the Regional Board. The Regional Board recognizes that the permittees should not be held responsible for such facilities and/or discharges. Similarly, certain activities that generate pollutants present in urban runoff may be beyond the ability of the permittees to eliminate. Examples of these include operation of internal combustion engines, atmospheric deposition, brake pad wear, tire wear and leaching of naturally occurring minerals from local geography.

11. This order regulates storm water runoff and certain types of de-minimus discharges specifically authorized under Section III of this order (collectively referred to as urban runoff) from areas under the jurisdiction of the permittees. For purposes of this order, urban runoff includes storm water and authorized non-storm water (see Section III) discharges from residential, commercial, industrial and construction areas within the permitted area and excludes discharges from feedlots, dairies, and farms. Urban runoff consists of surface runoff generated from various land uses in all the hydrologic drainage areas that discharge into waters of the US. The quality of these discharges varies considerably and is affected by land use activities, basin hydrology and geology, season, the frequency and duration of storm events, and the presence of illicit discharge[6] practices and illicit[7] connections.

12. The permittees have the authority to approve plans for residential, commercial, and industrial developments. If not properly controlled and managed, urbanization could result in the discharge of pollutants in urban runoff[8]. "America's Clean Water-The States' Nonpoint Source Assessment, 1985" and the Biennial National Water Quality Inventory Reports to Congress cite urban runoff as a major source of

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[6] Illicit discharge means any disposal, either intentionally or unintentionally, of material or waste that can pollute urban runoff or create a nuisance.

[7] Illicit connections are those which are not properly authorized or permitted by the municipality or the owner/operator of the conveyance system.

[8] U.S. EPA. 1983. Results of the Nationwide Urban Runoff Program, Vol. 1, Final report. NTIS PB84-185552.

beneficial use impairment. Urban area runoff may contain[9] elevated levels of pathogens (e.g., bacteria, protozoa, viruses), sediment, trash, fertilizers (nutrients, compounds of nitrogen and phosphorus), pesticides (e.g., DDT, Chlordane, Diazinon, Chlorpyrifos), heavy metals (e.g., cadmium, chromium, copper, lead, zinc), and petroleum products (e.g., oil, grease, petroleum hydrocarbons, polycyclic aromatic hydrocarbons). Urban runoff can carry these pollutants to rivers, streams, lakes, bays and the ocean (receiving waters[10]). In addition, increased flows due to urbanization may increase erosion of stream banks and channels and cause stream channel alterations and impact aquatic resources. This order regulates the discharge of pollutants to waters of the US, to protect beneficial uses of the receiving waters.

13. Urban activities also generate non-storm water discharges such as air conditioning condensate, irrigation runoff, individual residential car washing, etc., generally referred to as de minimus type of discharges. If properly managed, these types of discharges may not contain significant amount of pollutants. Some of these de minimus types of discharges are currently being regulated under separate orders issued by the Regional Board, and some of the specific types of de minimus discharges are authorized under this order (see Section III of this order). Orders No. R8-2003-0061 (NPDES No CAG998001), R8-2004-0021 (NPDES No. CAG998002) and R8-2007-0041 (NPDES No. CAG918002) issued by the Regional Board regulate de-minimus types of discharges.

D. HISTORY OF ORANGE COUNTY MUNICIPAL STORM WATER PERMIT

14. Prior to EPA's promulgation of the storm water permit regulations, the three counties (Orange, Riverside, and San Bernardino) and the incorporated cities within the jurisdiction of the Santa Ana Regional Board requested areawide NPDES permits for urban runoff. On July 13, 1990, the Regional Board adopted Order No. 90-71 for urban storm water runoff from urban areas in Orange County within the Santa Ana Region (first term Permit). Orders No. 96-31 (second term Permit) and R8-2002-0010 (third term Permit), issued by the Regional Board on March 8, 1996 and January 18, 2002, respectively, renewed the Orange County MS4 permit.

15. Order No. R8-2002-0010 expired on January 19, 2007. On July 22, 2006, the permittees submitted a Report of Waste Discharge for renewal of the Permit. On February 20, 2007, Order No. 2002-0010, NPDES No. CAS618030, was administratively extended in accordance with Title 23, Division 3, Chapter 9, §2235.4 of the California Code of Regulations.

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[9] Makepeace, D.K., D.W. Smith, and S.J. Stanley. 1995. Urban stormwater quality: summary of contaminant data. Critical Reviews in Environmental Science and Technology 25(2):93-139.

[10] Receiving waters are waters of the U.S. (and their tributaries) which are identified in the Basin Plan as having certain beneficial uses (see Finding 19, below, for a list of these waters).

E. PERMIT RENEWAL APPLICATION AND RELATED DOCUMENTS

16. The Report of Waste Discharge (the permit renewal application) included the following major documents/information:

    a) A summary of status of current Storm Water Management Program;

    b) A Proposed Plan of Storm Water Quality Management Activities for 2007-20012, as outlined in the Draft 2007 Drainage Area Management Plan (DAMP). The 2007 DAMP includes all the activities the permittees propose to undertake during the next permit term, goals and objectives of such activities, and an evaluation of the need for additional source control and/or structural and non-structural BMPs and proposed pilot studies;

    c) The permittees have developed Local Implementation Plans (LIPs); established a formal training program; and developed a program effectiveness assessment strategy and Watershed Action Plans;

    d) A Performance Commitment that includes new and existing program elements and compliance schedules necessary to implement controls to reduce pollutants to the maximum extent practicable;

    e) A summary of procedures implemented to detect illicit discharges and illicit connection practices;

    f) A summary of enforcement procedures and actions taken to require storm water discharges to comply with the approved Storm Water Management Program;

    g) A summary of public agency activities, results of monitoring program, and program effectiveness assessment; and,

    h) A fiscal analysis.

17. The documents referenced in Finding E.16, above, are hereby incorporated as enforceable elements of this order.

F. PERMITTED AREA

18. The permitted area is shown on Attachment A. It includes the northern portions of Orange County, including the 26 incorporated cities listed under Finding 6, above. The permittees serve a population of approximately 3.1 million, occupying an area of approximately 789 square miles (including unincorporated areas and the limits of 34 cities, 26 of which are within the jurisdiction of this Regional Board; three of the cities, Laguna Hills, Laguna Woods and Lake Forest, are within both the San Diego and Santa Ana Regional Boards' jurisdictions). The permittees have jurisdiction over and/or maintenance responsibility for storm water conveyance systems within Orange County. The County Flood Control system includes an estimated 740 miles of storm drains. A major portion of the urbanized areas of Orange County drains into waterbodies within this Regional Board's jurisdiction. In certain cases, where a natural streambed is modified to convey storm water flows, the conveyance system becomes both a storm drain and a receiving water. The major storm drain systems and drainage areas in Orange County, which are within this Region, are shown on

Attachment B. A portion of the Orange County drainage area is within the jurisdiction of the San Diego Regional Board and is regulated under an order issued by that Board.

G. RECEIVING WATERS AND BENEFICIAL USES

19. Storm water runoff from the MS4s in Orange County enter, or are tributary to, various water bodies of the Region. The permitted area can be subdivided into five tributary watersheds: the San Gabriel River drainage area, the Huntington Harbour and Bolsa Bay drainage area, the Santa Ana River drainage area, the Newport Bay drainage area, and the Irvine and Newport Coast Areas of Special Biological Significance (see Attachment B). These watersheds are tributary to the Pacific Ocean. The surface water bodies in Orange County that could be impacted by urban runoff include:

Inland Surface Streams

Santa Ana River, Reaches 1 and 2

Aliso Creek (tributary to Santa Ana River)

Carbon Canyon Creek (tributary to Santa Ana River)

Santiago Creek, Reaches 1, 2, 3, and 4 (tributary to the Santa Ana River)

Silverado Creek (tributary to Santiago Creek)

Black Star Creek (tributary to Santiago Creek)

Ladd Creek (tributary to Santiago Creek)

San Diego Creek, Reaches 1 and 2 (tributary to Newport Bay)

San Joaquin Freshwater Marsh (tributary to San Diego Creek)

Other tributaries to San Diego Creek: Bonita Creek, Serrano Creek, Peters Canyon Wash, Hicks Canyon Wash, Bee Canyon Wash, Borrego Canyon Wash, Agua Chinon Wash, Laguna Canyon Wash, Rattlesnake Canyon Wash, and Sand Canyon Wash

Santa Ana Delhi Channel (tributary to Newport Bay)

Big Canyon Wash (tributary to Newport Bay)

Buck Gully

Los Trancos Creek

Coyote Creek (tributary to San Gabriel River)

Other tributaries to the above listed rivers, creeks and channels

Bays, Estuaries, and Tidal Prisms

Anaheim Bay and Seal Beach National Wildlife Refuge

Sunset Bay

Bolsa Bay and Bolsa Chica Ecological Reserve

Upper and Lower Newport Bay

Tidal Prism of Santa Ana River (to within 1000 feet of Victoria Street) and Newport Slough, Santa Ana Salt Marsh

Tidal Prism of San Gabriel River (River Mouth to Marina Drive)

Tidal Prisms of Flood Control Channels Discharging to Coastal or Bay Waters (e.g. Huntington Harbour)

Ocean Water

Nearshore Zone

San Gabriel River to Poppy Street in Corona Del Mar

Poppy Street to Southeast Regional Boundary

Offshore Zone

Waters between Nearshore Zone and limit of State Waters

Lakes and Reservoirs

Anaheim Lake

Irvine Lake (Santiago Reservoir)

Laguna, Lambert, Peters Canyon, Rattlesnake, Sand Canyon and Siphon Reservoirs

20. The beneficial uses of these water bodies include: municipal and domestic supply, agricultural supply, industrial service and process supply, groundwater recharge, navigation, hydropower generation, water contact recreation, non-contact water recreation, commercial and sport fishing, warm freshwater and limited warm freshwater habitats, cold freshwater habitat, preservation of biological habitats of special significance, wildlife habitat, preservation of rare, threatened or endangered species, marine habitat, shellfish harvesting, spawning, reproduction and development of aquatic habitats, and estuarine habitat. The ultimate goal of this storm water management program is to achieve water quality objectives in the receiving waters, thereby protecting their beneficial uses.

21. Federal regulations, 40 CFR 131.10(a), prohibits the states from designating a water body for waste transport or waste assimilation. This order prohibits the construction of treatment BMPs within waters of the US. However, if the discharges are sufficiently treated to protect the beneficial uses of the receiving waters, further polishing of the discharge within waters of the US may be considered on a case-by-case basis. Federal authorization under Section 404 and Water Quality Standards Certification under Section 401 of the Clean Water Act may be required for waste treatment or conveyance within waters of the US. Pursuant to Water Code Section 13260, Waste Discharge Requirements may be required for such facilities within waters of the State. Under certain conditions, stream flows may be diverted for treatment (see Section III for conditions on return flows from facilities that extract, treat and return flows from the waters of the US).

H. INTERRELATED WATERSHEDS AND STORM WATER PERMITS

22. The Santa Ana River Basin is the major watershed within the jurisdiction of the Regional Board. The lower Santa Ana River Basin (downstream from Prado Basin) includes the Orange County drainage areas, and the Upper Santa Ana River Basin includes the San Bernardino County and the Riverside County drainage areas. Generally, the San Bernardino County drainage areas drain to the Riverside County drainage areas, and Riverside County drainage areas discharge to Orange County.

23. Within the Region, runoff from the San Bernardino County areas is generally conveyed to the Riverside County areas through the Santa Ana River or other drainage channels tributary to the Santa Ana River. These flows are then discharged to Reach 2 of the Santa Ana River through Prado Basin (Reach 3 of the Santa Ana River). During dry weather conditions, most of the flow in Reach 2 is recharged in Orange County. During wet weather, some of the flow is discharged to the Pacific Ocean through Reach 1 of the Santa Ana River.

24. The three county areas within this Region are regulated under three areawide permits for urban storm water runoff. These areawide NPDES permits are:

    Orange County, NPDES No. CAS618030;

    Riverside County, NPDES No. CAS618033; and,

    San Bernardino County, NPDES No. CAS618036.

    For an effective watershed management program, cooperation and coordination among the regulators, the municipal permittees, the public, and other entities are essential.

25. Studies conducted by the USEPA, the states, flood control districts and other entities indicate the following major sources for urban storm water pollution nationwide:

    Industrial sites where appropriate pollution control and BMPs are not implemented;

    Construction sites where erosion and siltation controls and other BMPs are not implemented; and,

    Urban runoff where the drainage area is not properly managed.

26. A number of permits have been adopted to address pollution from the sources identified in Finding 25, above. The State Board issued three statewide general NPDES permits: one for storm water runoff from industrial activities (NPDES No. CAS000001, General Industrial Activities Storm Water Permit), a second permit for storm water runoff from construction activities (NPDES No. CAS000002, General Construction Activity Storm Water Permit) and a third permit for Storm Water Runoff Associated with Small Linear Underground/Overhead Construction Projects (CAS000005). Industrial activities (as identified in 40 CFR 122.26(b)(14)) and construction sites of one acre or more, are required to obtain coverage under these statewide general permits. The permittees have developed project conditions of approval requiring coverage under the State's General Permits for new

developments to be implemented at the time of grading or building permit issuance for construction sites on one acre or more and at the time of local permit issuance for industrial facilities.

27. The State Board also adopted NPDES No. CAS000003 for storm water runoff from facilities (including freeways and highways) owned and/or operated by California Department of Transportation (Caltrans) and NPDES No. CAS000004, for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems. The Regional Board adopted Order No. R8-2007-0001, NPDES No. CAG018001, for concentrated animal feeding operations, including dairies. The Regional Board also issues individual storm water permits for certain industrial facilities within the Region. Currently there are two facilities located within Orange County. Additionally, for a number of facilities that discharge process wastewater and storm water, storm water discharge requirements are included with the facilities' NPDES permit for process wastewater.

28. In most cases, the industries and construction sites covered under the Statewide General Industrial and Construction Permits discharge into storm drains and/or flood control facilities owned and operated by the permittees. These industries and construction sites are also regulated under local laws and regulations. Federal regulations, 40 CFR Part 122.26(d)(2)(iv)(C), also require the permittees to develop and implement programs to control the discharge of pollutants from these sites. A coordinated effort between the permittees and Regional Board staff is critical to avoid duplicative and overlapping efforts when overseeing the compliance of dischargers covered under the Statewide General Permits. As part of this coordination, the permittees have been notifying Regional Board staff when they observe conditions that pose a threat or potential threat to water quality, or when an industrial facility or construction activity has failed to obtain required coverage under the appropriate general storm water permit.

29. Each watershed has unique receiving water issues, land uses, topography, soils and stream stability and habitat issues. The Regional Board and the permittees recognize the importance of integrated watershed management initiatives and regional planning and coordination in the development and implementation of programs and policies related to water quality protection. A number of such efforts are underway in which the permittees are active participants (e.g., Orange County Flood Control Master Plan, Irvine Ranch Water District Natural Treatment System Master Plan, Orange County Watershed Plans, Nutrient and Selenium Management Program, etc.). As recommended in the 2008 National Academy of Sciences Report on Urban Stormwater Management, this order provides an option for the permittees to develop and implement watershed master plans integrating water quality, hydromodification, water supply and habitat protection issues. The Regional Board recognizes that a watershed master plan should integrate all other related programs, including the storm water program and TMDL processes. Consistent with this approach, some of the municipal storm water monitoring programs have already been integrated into a regional monitoring program. The Regional Board also recognizes that, in certain cases, diversion of funds targeted for certain monitoring programs to regional monitoring programs may be necessary. The

Executive Officer is authorized to approve, after proper public notification and consideration of all comments received, the integrated watershed management initiatives and regional planning and coordination programs and regional monitoring programs. The permittees are required to submit all documents, where appropriate, in an electronic format. All such documents will be posted at the Regional Board's website and all interested parties will be notified. In addition, the website will include the administrative and civil procedures for appealing any decision made by the Executive Officer. Some urban runoff issues, such as monitoring, public education and training can be more effectively addressed on a regional or statewide basis, thereby increasing program consistency and efficiency. This order encourages continued participation in such programs and policies.

30. The permittees are required to conduct inspections (40 CFR Part 122.26(d)(2)(iv)(C)(2)) of construction sites, industrial facilities and commercial establishments. Inspection requirements, including criteria for prioritization of facilities for the inspection, were included in the third term permit. The construction and industrial inspection programs in the third term permit had established criteria/examples. However, the commercial inspection program only included a preliminary list of types of facilities to be inspected. Further refinements to the commercial inspection program are included in this order and these include: moving mobile businesses into their own program; including eating establishments (previously their own pilot program); and the addition of some key categories, not included on the 3rd term permit list. It should also be noted that some of these additional categories are directly related to current categories or identified in the Model Urban Runoff Program[11] and all of the additional categories are proposed for inclusion in other Southern California MS4 permits. To avoid duplicative efforts, the permittees need not inspect facilities that have been inspected by Regional Board staff, if the inspection was conducted during the specified time period. It is anticipated that many of the inspections required under this order can and will be carried out by inspectors currently conducting other types of inspections for the permittees (i.e., grading, building, code enforcement, etc.), during their normal duties. It is critical that these inspectors be properly trained in storm water pollution prevention and related issues.

I. POTENTIAL POLLUTANTS IN STORM WATER RUNOFF/IMPACTS ON BENEFICIAL USES

31. The permittees have conducted urban runoff and receiving water monitoring as required under the first, second and third term permits. The third term permit required monitoring using a wider array of methods to assess impacts caused by pollutants in urban runoff. In addition to monitoring the water column under wet and dry weather conditions, the permittees were required to monitor: water column toxicity, mass emission rates, estuary/wetlands including sediment and benthic monitoring, bacteriological/pathogen concentrations and bioassessment analysis. These monitoring programs indicate exceedances of Basin Plan, CTR and/or AB

[11] Model Urban Runoff Program, prepared by the City of Monterey, California Coastal Commission, et. al., revised February 2002 by California Coastal Commission.

411 objectives for a number of constituents. The Report of Waste Discharge identifies copper and zinc, trash and debris, pesticide toxicity and pathogens as the major pollutants of concern. Monitoring data indicate that storm water and dry weather urban runoff continue to have pollutants at levels that could cause or contribute to exceedances of water quality objectives in the receiving waters. The permittees are proposing to conduct special studies to address these pollutants of concern during the fourth term permit.

32. The annual reports submitted by the permittees indicate that urban runoff is still causing or contributing to water quality standards violations. Some of the samples collected during both dry and wet weather exceeded the water quality standards. However, the exceedances during wet weather were more widespread compared to dry weather runoff. The monitoring reports indicate that there is some reduction in the mass loading rates for some of the metals, such as copper and zinc.

33. The results from the monitoring programs did not establish a clear correlation between pollutants in dry or wet weather runoff and impacts on beneficial uses in the receiving waters. However, exceedances of water quality objectives, including exceedances of AB411 standards, were reported for a number of monitoring locations by the permittees. Shoreline monitoring data indicate that AB411 exceedances are higher during the summer months (AB411 season) compared to the winter months. For the interior channels, AB411 exceedances were higher than shoreline, but were not significantly different for summer and winter months[12]. The index of biotic integrity rating is generally poor for most urban streams. The monitoring data also indicated sporadic exceedances of water quality objectives for dissolved oxygen, pH, turbidity, ammonia-nitrogen, surfactants, and some of the metals[13].

34. During the summers of 1999 and 2000, a number of locations along the Orange County coast exhibited elevated bacterial levels. Since then a number of studies have been conducted that indicate that urban runoff, especially dry weather runoff, is a major contributing factor to the Orange County coastal bacterial contamination problems. To address this bacterial problem, the permittees currently divert dry weather low flows from some of these areas to the sanitary sewer. With the diversion of dry weather flows to the sanitary sewer, there have been significant improvements in the beach water quality. A number of studies have been conducted to determine the source of this microbial contamination and to develop permanent remedial measures. These studies have not conclusively determined the sources or solutions to this problem.

35. Monitoring results have indicated the presence of elevated concentrations of pesticides in storm water runoff from urban areas. The permittees have developed and implemented a model plan entitled, "Management Guidelines for Use of Fertilizers and Pesticides". The Report of Waste Discharge indicates that through implementation of this program, the municipalities have reduced the use of fertilizers

[12] Unified Annual Progress Report, 2005-2006, Page C-11-31.

[13] Unified Annual Progress Report, 2005-2006, Attachment C-11-VII.

and pesticides. The permittees are required to review this plan to make any needed changes. TMDLs are being developed for some of the pesticides for the Newport Bay watershed. This order may be reopened to include any TMDL requirements.

36. Pollutants in urban runoff can impact the beneficial uses of the receiving waters and can cause or threaten to cause a condition of pollution or nuisance. Pathogens, such as bacteria, viruses, protozoa, (from sanitary sewer overflows, septic system leaks, spills and leaks from portable toilets, pets, wildlife and human activities) can impact water contact recreation, non-contact water recreation and shellfish harvesting. Microbial contamination of the beaches from urban runoff and other sources has resulted in a number of health advisories issued by the Orange County Health Officer. Oil and grease (from automobiles, industrial sites, etc.) can coat birds and aquatic organisms, adversely affecting respiration and/or thermoregulation. Other petroleum hydrocarbon components can cause toxicity to aquatic organisms and can impact human health. Suspended and settleable solids (from sediment, trash, and industrial activities) can be deleterious to benthic organisms and may cause anaerobic conditions. Sediments and other suspended particulates (from construction sites, erosion due to hydromodification, etc.) can cause turbidity, clog fish gills and interfere with respiration in aquatic fauna. These pollutants can also screen out light, hindering photosynthesis and normal aquatic plant growth and development. Toxic substances (from pesticides, herbicides, petroleum products, metals) can cause acute and/or chronic toxicity, and can bioaccumulate in organisms to levels that may be harmful to human health. Nutrients (from fertilizers, confined animal feeding operations, wildlife, pets and birds) can cause excessive algal blooms. These blooms can lead to problems with taste, odor, color and increased turbidity, and can depress the dissolved oxygen content, leading to fish kills. Stagnant water trapped in trash and debris creates breeding conditions for disease vectors (e.g., mosquitoes). Trash and debris, in particular plastics, have long been recognized as both aesthetic nuisances and as threats to freshwater and marine environments. Plastic debris, in the form of broken-down packaging and pre-production plastic pellets or 'nurdles', harms hundreds of wildlife species through ingestion, entanglement and entrapment. These plastic nurdles have the capability of absorbing pollutants, such as PCBs, and when ingested by wildlife, expose those animals to pollutant concentrations that are orders of magnitude higher than the surrounding water. Water Code Section 13367 requires the State Board and the regional boards to implement a program to control discharges of preproduction plastic from point and nonpoint sources. In collaboration with the permittees, Regional Board staff is currently trying to address this problem through the State's General Storm Water Permit for Industrial Activities and local controls.

37. Pollutants in urban runoff could adversely impact human health and the environment. Human illnesses have been linked to recreational activities in coastal waters especially near storm drain outlets[14]. Bioaccumulation of pollutants, present

[14] The Santa Monica Bay Restoration Project, Epidemiology Study, 1996.

in urban runoff, can occur in fish and other aquatic organisms. These organisms may be consumed by birds and humans. Pollutants in urban runoff can also cause mortality, impair growth and reproduction anomalies in aquatic organisms. If not properly designed and maintained, urban storm water treatment systems could provide breeding areas for disease vectors, such as mosquitoes, which are a public health concern (e.g., West Nile Virus).

38. It is important to control litter in order to eliminate trash and other materials in storm water runoff. In addition to the municipal ordinances prohibiting litter, the permittees participate or organize a number of other programs such as "Coastal Cleanup Day", "Pride Days", "Volunteer Collection Day", etc. The permittees also organize solid waste collection programs, household hazardous waste collections, and recycling programs to reduce litter and illicit discharges. Additionally, the permittees have installed debris booms at a number of locations to capture trash and debris preventing it from depositing on beaches.

39. The pollutants from urbanized areas are also a significant threat to environmentally sensitive areas, such as waterbodies designated as supporting a RARE beneficial use (supporting rare, threatened or endangered species), areas of special biological significance (ASBSs) and Clean Water Act Section 303(d) listed impaired waterbodies. The State Board is developing Special Protections for Storm Water and Non-point Source Discharges to ASBSs. Where applicable, the permittees are expected to comply with these Special Protection requirements for the ASBSs.

J. CWA SECTION 303(d) LISTED WATERBODIES AND TMDLS

40. Water quality assessments conducted by Regional Board staff have identified a number of water quality standards impairments due, in part, to urban runoff. Section 305(b) of the CWA requires each of the regional boards to routinely monitor and assess the quality of waters of the region. If this assessment indicates that beneficial uses and/or water quality objectives are not being met, then that waterbody must be listed under Section 303(d) of the CWA as an impaired waterbody. The 2006 State water quality assessment listed a number of water bodies within the Region under Section 303(d) as impaired waterbodies. For many of these impaired waterbodies, one of the listed causes of impairment is urban runoff. In the Orange County area, these include:

San Diego Creek, Reach 1 (listed for toxaphene, selenium, fecal coliform, nutrients, pesticides, sediment/siltation);

San Diego Creek, Reach 2 (listed for metals, nutrients, sediment/siltation, unknown toxicity);

Upper Newport Bay Ecological Reserve (listed for sediment toxicity, metals, copper, chlordane, PCBs, DDT, nutrients, pathogens, pesticides, sediment/siltation);

Lower Newport Bay (listed for chlordane, copper, DDT, sediment toxicity, PCBs, nutrients, pathogens, pesticides);

Anaheim Bay (listed for nickel, dieldrin, sediment toxicity, PCBs);

Huntington Harbour (listed for copper, lead, nickel, chlordane, pathogens, PCBs, sediment toxicity);

Santiago Creek, Reach 4 (listed for salinity, TDS, chlorides);

Seal Beach (listed for enteroccocus, PCBs);

Silverado Creek (listed for pathogens, salinity, TDS, chlorides);

Rhine Channel (listed for copper, lead, mercury, zinc, sediment toxicity, PCBs);

Peters Canyon Channel (listed for DDT, toxaphene);

Los Trancos Creek (Crystal Cove Creek) (listed for total and fecal coliform);

Huntington Beach State Park (listed for enteroccocus, indicator bacteria, PCBs);

Bolsa Chica State Beach (listed for copper and nickel);

Buck Gully Creek (listed for total and fecal coliform); and

Balboa Beach (listed for dieldrin, DDT, PCBs).

41. Federal regulations require that a total maximum daily load (TMDL) be established for each 303(d) listed waterbody for each of the pollutants causing impairment. The TMDL is the total amount of the pollutant that can be discharged while water quality standards in the receiving water are attained, i.e., water quality objectives are met and the beneficial uses are protected. A TMDL is the sum of the individual wasteload allocations (WLA) for point source inputs, load allocations (LA) for non-point source inputs and natural background, plus a margin of safety. TMDLs are one of the bases for limitations established in waste discharge requirements.

42. For 303(d) listed waterbodies without a TMDL, the permittees are required to provide special protections through development and implementation of Watershed Action Plans or other focused control measures that would address the pollutant of concern. If a TMDL has been developed and an implementation plan is yet to be developed, the permittees are required to develop constituent specific source control measures, conduct additional monitoring and/or cooperate with the development of an implementation plan.

43. TMDLs have been established by the Regional Board for sediment, fecal coliform, diazinon, chlorpyrifos and nutrients for the Newport Bay watershed. Organochlorine compounds TMDLs were adopted by the Regional Board on September 7, 2007. In addition, toxics TMDLs were promulgated by USEPA on June 14, 2002, including TMDLs for metals and selenium, and a TMDL specific to the Rhine Channel located in Lower Newport Bay.

44. TMDLs for diazinon and chlorpyrifos in San Diego Creek, and for chlorpyrifos in Upper Newport Bay, were adopted by the Regional Board on April 4, 2003, and subsequently approved by the State Board, State Office of Administrative Law, and EPA. The diazinon and chlorpyrifos TMDLs require all MS4 permittees in the

Newport Bay Watershed to develop and implement monitoring programs for diazinon and chlorpyrifos. The TMDLs also impose limits on the discharge of these compounds. This order incorporates these requirements.

45. The fecal coliform TMDL specifies WLAs for urban runoff to protect water contact recreation and shellfish harvesting beneficial uses. The implementation plan for the fecal coliform TMDL requires that monitoring and certain investigations be conducted, including a source identification and characterization investigation of urban runoff. An updated TMDL report is to be prepared based on the data and information collected, and the TMDL is to be adjusted, as necessary, based on the updated TMDL report. This order may be reopened to incorporate additional requirements based on findings in the source identification and characterization plan that is expected to be completed in 2009. This order may be reopened to incorporate additional or revised requirements based on the updated TMDL report and/or approved changes to the TMDL.

46. As indicated above, nutrient (nitrogen and phosphorus) TMDLs have been established by the Regional Board for the Newport Bay watershed. The current and future (year 2012) targets for the nutrient TMDLs are already being met. However, Board staff is currently reevaluating the nutrient TMDLs in light of evidence that there remains impairment of these waters due to eutrophication. The EPA promulgated TMDLs for selenium but, an implementation plan is yet to be developed. The Regional Board adopted Orders No. R8-2004-021 and R8-2007-0041 as interim control measures to address nitrogen and selenium in groundwater-related discharges to the Newport Bay watershed. In response to Order No. R8-2004-0021, stakeholders established a Nitrogen Selenium Management Program (NSMP) Working Group. The Working Group is implementing an approved workplan that is expected to identify comprehensive management plans for both selenium and nitrogen in groundwater in the Newport Bay watershed. Board staff is currently developing selenium TMDLs that will update and revise those established by EPA and that will include an implementation plan. The implementation plan will rely heavily on the findings and recommendations made by the NSMP Working Group. It is expected that the implementation plan will include the opportunity for an adaptive, collaborative approach by stakeholders in the watershed to address selenium and nitrogen in comprehensive and efficient fashion. This approach may be implemented through a cooperative agreement or, alternatively, through waste discharge requirements or a conditional waiver of waste discharge requirements.

47. In support of the nutrient TMDLs implementation plan, a regional monitoring program (RMP) was developed to monitor nutrients in San Diego Creek and Newport Bay. This order requires the permittees listed under the RMP to continue their participation in the RMP program.

48. On September 7, 2007, the Regional Board adopted TMDLs for organochlorine compounds (OCs) that specify WLAs for urban runoff for DDT and toxaphene in San Diego Creek, and DDT, chlordane, and PCBs in Upper and Lower Newport Bay. The OCs TMDLs also specify informational TMDLs with informational urban

runoff WLAs for chlordane and PCBs in San Diego Creek. The OCs TMDLs require approval from the State Board, the State Office of Administrative Law, and EPA. The implementation plan for the OCs TMDLs includes monitoring and, where necessary, enhanced implementation of best management practices (BMPs) to reduce erosion and sediment transport as organochlorine compounds tend to adhere to fine sediment. In addition, the OCs TMDL implementation plan provides an opportunity for dischargers to participate in the development and implementation of a comprehensive Work Plan that would address the OCs and other sources of toxicity in the San Diego Creek and Newport Bay watersheds. Once a Work Plan is developed, it is required to be approved by the Regional Board at a public hearing. Participation by the permittees in this process will obviate the need for individual actions on the tasks in Table NB-OCs-13[15] by members of the Working Group. The County of Orange and Newport Bay watershed MS4 permittees have initiated efforts to develop a Work Plan. MS4 permittees not electing to participate in the Work Plan approach will be required to implement the tasks shown in Table NB-OCs-13, as appropriate.

49. The State Board awarded a grant to the South Coast Resource Conservation and Development Council in partnership with the University of California Cooperative Extension to investigate and demonstrate strategies to reduce pesticide runoff from urban areas. A pesticide management plan for the Newport Bay watershed has been developed under this program[16].

50. If the TMDL implementation plans include compliance schedules beyond the permit term, monitoring and other requirements are being included in this order to monitor progress towards achieving future compliance.

51. Certain portions of the San Gabriel River watershed are under the Los Angeles Regional Board's jurisdiction. Urban runoff from cities and county areas within the northwestern portions of Orange County discharge into the San Gabriel River and/or its tributaries. On July 13, 2006, the Los Angeles Regional Board adopted TMDLs for metals in the San Gabriel River watershed. However, because of the state's inability to meet the March 2007 deadline for an approved TMDL prescribed in a consent decree (Heal the Bay Inc., et al. v. Browner C98-4825 SBA), on March 26, 2007, the EPA promulgated TMDLs for metals and selenium for the San Gabriel River. The upper portions of Coyote Creek flow through Orange County to join the San Gabriel River above the tidal prism. Other unnamed tributaries located in northwestern Orange County also discharge into the San Gabriel River estuary. The EPA promulgated TMDLs include wet weather wasteload allocations for Coyote Creek for copper, lead and zinc and dry weather wasteload allocations for copper for Coyote Creek. The permittees are expected to implement programs and policies consistent with the metals and selenium TMDLs for the San Gabriel River watershed. This includes constituent-specific source control programs or other equally effective programs to control

[15] Attachment 2 to Resolution No. R8-2007-0024.

[16] Darren L. Haver and John N. Kabashima, June 30, 2008, Pesticide Runoff Management Plan, Newport Bay Watershed.

the discharge of copper, lead and zinc into Coyote Creek and other tributaries in Orange County that discharge into the San Gabriel River.

52. This order requires permittees to comply with established TMDL wasteload allocations specified for urban runoff and/or storm water by implementing the necessary BMPs. NPDES regulations at 40 CFR 122.44(d)(vii)(B) require that permits be consistent with wasteload allocations approved by U. S. EPA. This order requires the permittees to comply with the urban runoff/storm water wasteload allocations specified in (1) Regional Board-adopted and USEPA approved TMDLs (including TMDLs for nutrients, fecal coliform, diazinon and chlorpyrifos); (2) Regional Board-adopted TMDLs that are approved by the State Board and State Office of Administrative Law and that are thereby effective (approval of organochlorine compounds TMDLs by the State is pending); and, (3) USEPA-promulgated TMDLs (including toxics TMDLs for the Newport watershed). Continuation of water quality/biota monitoring and analysis of the data are essential to better understand the impacts of storm water discharges on the water quality of the receiving waters, impairment caused by urban runoff, compliance with the wasteload allocations and for assessing the effectiveness of control measures.

53. Permittees will be required to comply with established TMDLs and other water quality standards or discharge requirements that may be imposed by the EPA or the State prior to the expiration of this order. This order may be reopened to address established or revised TMDLs and/or other requirements developed and adopted by the Regional Board, EPA or the State Board.

K. DRAINAGE AREA MANAGEMENT PLAN (DAMP)

54. Urban development increases population density and pollutant sources[17] such as construction activities, industrial facilities, auto emissions, wastes related to automobile maintenance activities, sanitary wastes, pesticides, pet wastes, household hazardous wastes and trash[18]. If appropriate BMPs are not implemented, retail gasoline outlets and automobile service stations could be significant sources of pollutants in urban runoff including petroleum hydrocarbons, oil and grease, metals and solvents[19].

55. The local agencies (the permittees) are the owners and operators of the storm water conveyance systems and have established appropriate legal authority to control discharge of pollutants to the MS4s. The permittees have adopted grading and erosion control ordinances and guidelines for the implementation of best management practices (BMPs) for municipal, commercial, and industrial activities.

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[17] U.S. EPA (1992). *Environmental Impacts of Storm Water Discharges: A National Profile,* EPA 841-R-92-001; Office of Water, Washington, DC.

[18] National Management Measures to Control Nonpoint Source Pollution from Urban Areas. USEPA Publication No. EPA 841-B-05-004, November 2005.

[19] Retail Gasoline Outlet and Commercial Parking Lot Storm Water Runoff Study, Western States. Petroleum Association and American Petroleum Institute (1994) at p 13. The study concludes that pollutant concentrations in storm water discharges from properly managed RGOs are similar to concentrations from commercial parking lots and diffuse urban runoff.

The permittees must exercise a combination of these programs, policies, and legal authority to ensure that pollutant loads resulting from urbanization are properly controlled and managed.

56. One of the major tools that the permittees use for urban runoff pollution prevention is the development and implementation of an appropriate DAMP, including best management practices (BMPs). The ultimate goal of the urban storm water management program is to support attainment of water quality objectives for the receiving waters and to protect beneficial uses through the implementation of the DAMP. The permittees developed and submitted a revised draft 2007 DAMP.

57. The DAMP is a dynamic document and the permittees have implemented, or are in the process of implementing, various elements of the DAMP. This order requires the permittees to continue to implement the BMPs listed in the revised DAMP; update or modify the DAMP, when appropriate, consistent with the MEP and other applicable standards; and to effectively prohibit illicit discharges to the storm drain system.

58. The Orange County DAMP defined: (1) a management structure for the permittees' compliance effort; (2) a formal agreement to underpin cooperation; and (3) a detailed municipal effort to develop, implement, and evaluate various BMPs or control programs in the areas of public agency activities, public information, new development and construction, public works construction, industrial discharger identification, and illicit discharger/connection identification and elimination.

59. In order to meet DAMP requirements and characterize and manage pollutant sources on a local level, the permittees developed LIPs. Each jurisdiction has developed its own LIP and is implementing the LIP to properly manage, reduce and mitigate potential and actual pollution sources within the boundaries of each permittee's jurisdiction.

L. NEW DEVELOPMENT/SIGNIFICANT REDEVELOPMENT – WQMP/LIP/LID

60. A major portion of Orange County is urbanized with residential, commercial and industrial developments. Urban development increases impervious surfaces and storm water runoff volume and velocity and decreases vegetated, pervious surface areas available for infiltration and evapotranspiration of storm water. Increase in runoff volume and velocity can cause scour, erosion (sheet, rill and/or gully), aggradation (raising of a streambed from sediment deposition) and can change fluvial geomorphology, hydrology and aquatic ecosystems. This order includes requirements to address increases in imperviousness and changes in water quality and quantity, including hydrologic conditions of concern.

61. Recent studies have indicated that low impact development[20] (LID) BMPs are effective storm water management tools that minimize adverse impacts on storm water runoff quality and quantity resulting from urban developments. The Southern

[20] Low impact development is an approach to land development (or re-development) that works with nature to manage storm water as close to its source as possible by using structural and non-structural best management practices to reduce environmental impacts.

California Monitoring Coalition (SMC), including the project lead agency, the San Bernardino County Flood Control District, in collaboration with SMC member Southern California Coastal Water Research Project (SCCWRP) and the California Storm Water Quality Association (CASQA), with funding from the State Water Resources Control Board and CASQA, is developing a Low Impact Development Manual for Southern California. A preliminary draft of this manual indicates that effective implementation of site design LID BMPs should occur during the earliest stages of planning such as site assessment, environment review and site planning. This manual will be incorporated into the CASQA BMP Handbooks. The permittees are encouraged to utilize the manual as a resource to implement LID techniques. This order requires the project proponents to first consider preventative and conservation techniques (e.g., preserve and protect natural features to the maximum extent practicable) prior to considering mitigative techniques (structural treatment, such as infiltration systems). The mitigative measures should be prioritized with the highest priority for BMPs that remove storm water pollutants and reduce runoff volume, such as infiltration, then other BMPs, such as harvesting and re-use, evapotranspiration and bio-treatment should be considered. These LID BMPs must be implemented at the project site in a manner consistent with the maximum extent practicable standard. Where LID BMPs are not feasible at the project site, more traditional, but equally effective control measures should be implemented.

62. The USEPA has determined that LID/green infrastructure can be a cost-effective and environmentally preferable approach for the control of storm water pollution and will minimize downstream impacts by limiting the effective impervious area of development. LID and the reduction of impervious areas may achieve multiple environmental and economic benefits in addition to reducing downstream water quality impacts, such as enhanced water supplies, cleaner air, reduced urban temperatures, increased energy efficiency and other community benefits, such as aesthetics, recreation, and wildlife areas. USEPA has reviewed studies[21] that have evaluated the percent EIA[22] concept (also see the SCCWRP study[23]). The limited study conducted by Dr. Richard Horner[24] concluded that a 3% EIA standard for development is feasible in Ventura County. EPA believes that EIA is a reasonable metric for incorporating LID principles into storm water permits and EPA supports

[21] See for example the analysis prepared by Dr. Richard Horner entitled, "Investigation of the Feasibility and Benefits of Low-Impact Site Design Practices ("LID") for Ventura County" submitted to the Los Angeles Regional Board by NRDC.

[22] EIA=effective impervious area. These are areas where little or no infiltration of storm water occur, such as paved areas.

[23] Studies conducted by Southern California Coastal Water Research Project (SCCWRP) and others indicate that environmental impacts from developments could be minimized by limiting the effective impervious area.

[24] Dr. Richard Horner, Investigation of the Feasibility and Benefits of Low-Impact Site Design Practices ("LID") for Ventura County, Development (undated).

other equally effective metrics for compliance determination. A review of the analysis of the LID metrics in storm water permitting[25] and its critique[26] indicates that there are certain shortcomings in specifying a percentage EIA as a metric. A series of stakeholder meetings[27] conducted after issuance of the first draft of this order concluded that other equally effective metrics could be used to quantify implementation of LID. It was generally agreed by the stakeholders that a numeric metric, such as a metric based on a specified volume capture may be an equally effective metric. A 5% EIA metric was included in the first draft of this order. The second draft replaces the 5% EIA metric with a volume capture metric based on the design volume specified in the WQMP.

63. On October 5, 2000, the State Board adopted Order No. WQ-2000-11, which is a precedential order. Order No. WQ-2000-11 required that urban runoff generated by 85th percentile storm events from specific types of development categories should be infiltrated, filtered or treated. The essential elements of this precedential order were incorporated into the Region 8 Orange County third term permit. In accordance with the requirements specified in the third term permit, the permittees developed a model Water Quality Management Plan (WQMP) by amending their Drainage Area Management Plan (DAMP). The model WQMP provides a framework to incorporate watershed protection principles into the permittees planning, construction and post-construction phases of defined new and redevelopment projects. The model WQMP includes site design, source control and treatment control elements to reduce the discharge of pollutants in urban runoff. On September 26, 2003, the Regional Board approved the model WQMP. The permittees have incorporated provisions of the model WQMP into their LIPs. The permittees are requiring new developments and significant redevelopments to develop and implement appropriate project WQMPs. This order requires continued implementation of structural and non-structural BMPs for new developments and significant redevelopments as per the approved model WQMP, and the priority project threshold for commercial/industrial developments has been changed to 10,000 square feet, making it consistent with the threshold for residential subdivisions. However, with the implementation of LID techniques, some of the structural treatment control BMPs may not be necessary. The project WQMPs are required to include a discussion on how LID principles are incorporated into the project. Section 7.II-3.2.4 of the WQMP requires identification of hydrologic conditions of concern (HCOC). An HCOC exists when a site's hydrologic regime is

[25] Low Impact Development Metrics in Stormwater Permitting, Prepared for the Ventura Countywide Stormwater Quality Management Program and the Orange County Stormwater Program by Geosyntec Consultants and Larry Walker Associates with Assistance from Hawks and Associates (January 2009).

[26] Critique of Certain Elements of "Low Impact Development Metrics in Stormwater Permitting" by Dr. Richard Horner (undated, submitted by NRDC on February 13, 2009).

[27] The stakeholder group included representatives from Permittees, NRDC, Orange County Coastkeeper, BIA/CICWQ, The Irvine Company, Regional Board staff, USEPA and a number of consultants and attorneys.

altered and there are significant impacts on downstream channels and aquatic habitats, alone or in conjunction with impacts of other projects. Currently, new development and significant re-development projects are required to perform this assessment and incorporate appropriate BMPs to ensure existing hydrologic conditions are maintained. Certain jurisdictions have employed HCOC mapping efforts to assist developers in identifying areas where HCOC conditions exist. Within six months of adoption of this order, the permittees are required to conduct an HCOC mapping to identify HCOC areas in the permitted area.

64. The Region 8 Orange County third term permit required the permittees to review their planning (CEQA, General Plan, etc.) and approval processes to determine the need to revise those processes to address appropriate storm water protection principles. The model WQMP provides a framework for addressing these issues. However, Regional Board staff's audit of the permittees MS4 program indicated that all the permittees had not fully implemented the program. This order requires the permittees to reevaluate and to revise the current program implementation processes. Pollution prevention techniques, appropriate planning processes and early identification of potential storm water impacts and mitigation measures can significantly reduce storm water pollution problems. The permittees shall consider these impacts and appropriate mitigation measures during the planning and approval processes.

65. The intent of the WQMP, SWPPP and other programs and policies incorporated into this order is to minimize the impact from the project on water quality and the environment. However, compliance with this order and the DAMP does not necessarily constitute mitigation that is sufficiently specific to satisfy the requirements of CEQA with regards to projects.

66. Treatment control BMPs include vortex systems, catch basin inserts, detention basins, infiltrations areas (including LID-based), retention basins, regional treatment systems, constructed wetlands, various types of storm water filters, etc. If not properly designed and managed, these systems could be sources of pollutants and could become a nuisance and/or cause the spreading of surface water pollution, and those treatment systems with a hydraulic connection to groundwater (e.g., detention basins, infiltration systems, constructed wetlands, etc.) could be sources of groundwater pollution. Restrictions placed on urban runoff infiltration in this order (Section XII.B.5.) are based on recommendations provided by the U.S. EPA Risk Reduction Laboratory. The requirements specified in this order include identification of responsible agencies for maintaining the systems and for providing funding for operation and maintenance.

67. If not properly designed and maintained, the BMPs identified in Finding 66 could create a nuisance and/or habitat for vectors[28] (e.g., mosquitoes and rodents). Third term permit required the permittees to closely collaborate with the Orange County

[28] Managing Mosquitoes in Stormwater Treatment Devices, Marco E. Metzger, University of California Davis, Division of Agriculture and Natural Resources, Publication 8125.

Vector Control District during the development and implementation of such treatment systems. The permittees should continue these collaborative efforts with the Vector Control District to ensure that treatment control systems do not become a nuisance or a potential source of pollutants. There are other site conditions that limit the applicability of infiltration, including site soils, contaminant plumes, potential mobilization of naturally occurring contaminants such as selenium, high groundwater levels, etc. Such factors should be considered in the design and implementation of storm water control measures.

M. NON-STORM WATER/DE-MINIMUS DISCHARGES

68. The MS4s generally contain non-storm water flows such as irrigation runoff, runoff from non-commercial car washes, runoff from miscellaneous washing and cleaning operations, and other nuisance flows generally referred to as de-minimus discharges. Federal regulations, 40 CFR Part 122.26(d)(2)(i)(B), prohibit the discharge of non-storm water containing pollutants into the MS4s and to waters of the U.S. unless they are regulated under a separate NPDES permit, or are exempt, as indicated in Discharge Prohibitions, Section III.3 of this order. The Regional Board adopted a number of NPDES permits[29] to address de-minimus type of pollutant discharges. However, the permittees need not get coverage under the de-minimus permits for the types of discharges listed under Section III.3, except for discharges to the Newport Bay watershed (where coverage under the Newport Bay watershed-specific de-minimus permit is required, see Finding 69), as long as they are in compliance with the conditions specified under Section III of this order.

69. Many areas of the San Diego Creek/Newport Bay watershed have high nitrate and/or selenium levels in the soils and/or groundwater. Dewatering operations, construction activities and agricultural and other operations could mobilize these pollutants and carry them into San Diego Creek and Newport Bay. The Regional Board has adopted a General Permit, Order No. R8-2007-0041, to regulate dewatering wastes into the San Diego Creek/Newport Bay watershed. In addition, stakeholders in the watershed are in the process of developing a comprehensive nitrogen/selenium management plan to address the nitrogen/selenium issues.

N. PERMIT REQUIREMENTS AND NUMERIC EFFLUENT LIMITS

70. The first term permit required the permittees to: (1) develop and implement the DAMP and a storm water and receiving water monitoring plan; (2) eliminate illicit discharges[30] to the MS4s; and (3) enact the necessary legal authority to effectively

[29] E.g., R8-2003-0061,as amended by R8-2004-0021.

[30] Illicit Discharge means any discharge to the municipal separate storm system that is prohibited under local, state, or federal statutes, ordinances, codes, or regulations. The term illicit discharge includes all discharges that contain non storm-water discharges except discharges pursuant to an NPDES permit, discharges that are identified in Section III, Discharge Limitations/Prohibitions, of this order, and discharges authorized by the Regional Board Executive Officer.

prohibit such discharges. The overall goal of these requirements was to reduce pollutant loadings to surface waters from urban runoff to the MEP. The second term permit required continued implementation of the DAMP and the monitoring plan, and required the permittees to focus on those areas that threaten beneficial uses. The third term permit required the permittees to inspect construction sites and industrial and commercial facilities. The permittees were also required to develop and implement a model WQMP to address runoff from new development and significant redevelopment projects. The principal permittee, in co-operation with the co-permittees, developed administrative strategies and implementation procedures for each program element. Each permittee incorporated these tools into its LIP. The permittees are required to continue to implement each of these program elements and to aggressively pursue implementation of LID techniques during the fourth term permit. As required under the third term permit, the principal permittee, in collaboration with the co-permittees, evaluated the effectiveness of the overall program during the permit term. The permittees, in consultation with Regional Board staff, evaluated each program element and proposed new and improved program commitments in their 2006 Report of Waste Discharge. Regional Board staff audited each of the permittee programs during the third term permit and determined that some of the permittees had significant violations with respect to implementation of certain program elements. Enforcement actions were taken to bring these permittees into compliance. The permittees were required to address problems identified during the audit. Some of the permittees were to amend their LIPs to address deficiencies noted during the audit.

71. Based on the results of the audits performed during the 3rd term permit, a number of permit requirements have been incorporated into the current permit. While the 2001 DAMP listed criteria by which co-permittees were to assess the priority ranking of commercial sites, a number of co-permittees had interpreted those criteria in such a manner as to ensure that only a very small number of sites would be ranked 'High' and in some cases, all commercial sites within a municipality were ranked 'Low,' resulting in the least number of inspections possible. To address this situation, commercial site ranking now requires that a minimum 10% of the sites with the highest potential for pollutant discharge, be ranked 'High' and next 40% of highest potential sites be ranked 'Medium,' for inspection purposes.

72. The Report of Waste Discharge proposes to enhance implementation of various program elements through the development of performance indicators and auditable systems, and by focusing on addressing problems on a watershed-specific basis. To improve program management efficiencies, the permittees are proposing to define expertise and competencies for program managers and inspectors, and to develop and implement an effective training program for them. The principal permittee in collaboration with the co-permittees is required to develop guidelines for defining the expertise and competencies for various positions and training programs and schedules for training for these positions. In the event that co-permittees want to design their own training program, it should be prepared in collaboration with the principal permittee, and at a minimum, should contain all information present in the principal permittee-prepared training program. The permittees are required to document procedures used to determine the defined

competencies for each storm water position (this may be accomplished through a test at the end of the training program or through an on-the-job testing procedure).

73. This order includes wasteload allocations for those constituents for which either the U.S. EPA has promulgated or the Regional Board has established TMDLs. Federal regulations (40 CFR 122.44(d)(vii)(B)) require that the Permits be consistent with the applicable wasteload allocations in the TMDLs. Consistent with the federal storm water laws and regulations, the order does not include numeric effluent limits for other potential pollutants. Federal Clean Water Act requires the permittees to have appropriate controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and systems, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants (33 USC 1342(p)(3)(B)). MEP is a dynamic performance standard and it evolves as our knowledge of urban runoff control measures increases.

74. On June 17, 1999, the State Board adopted Water Quality Order No. 99-05. This is a precedential order that incorporates the receiving water limitations language recommended by the USEPA. Consistent with the State Board's order, this order requires the permittees to comply with the applicable water quality standards, which is to be achieved through an iterative approach requiring the implementation of increasingly more effective BMPs. This approach is consistent with most of the municipal storm water permits issued in California that specify certain minimum control measures and incorporate an iterative process that requires increasingly more effective control measures if the water quality objectives are not met.

O. MUNICIPAL FACILITIES AND ACTIVITIES

75. The permittees own and operate MS4s and appurtenances, build and maintain roads and other transportation facilities, sanitary waste collection and conveyance systems, recreational facilities such as parks, hiking trails, etc., and other infrastructures of the urban environment. This order requires the permittees to consider water quality impacts during the planning stages of these projects, during construction and post-construction use, and during operation and maintenance of these facilities. This order includes requirements for the control of trash and debris, for street sweeping, and for drainage facilities maintenance. The permittees have already installed eleven trash and debris booms in flood control channels and harbors to recover floatable material. The permittees have promoted a number of public awareness and volunteer cleanup programs. The Orange County Integrated Waste Management Board administers the household hazardous waste collection program. Most of the permittees, in collaboration with the Orange County Health Care Agency, implement the oil recycling program.

76. The permittees own and/or operate facilities where industrial or related activities take place that may have an impact on storm water quality. Some of the permittees also enter into contracts with outside parties to carry out municipal related activities that may also have an impact on storm water quality. The permittees have developed and are implementing a Model Municipal Activities Program that

established a framework for conducting a systematic program of evaluation and BMP implementation for fixed facilities, field operations and drainage facilities. Non-storm water discharges from these facilities and/or activities could also affect water quality. This order prohibits non-storm water discharges from public facilities, unless the discharges are exempt under Section III, Discharge Limitations, of this order, or are permitted by the Regional Board under an individual NPDES permit or the de-minimus permits.

77. Successful implementation of the provisions and limitations in this order will require the cooperation of public agency organizations within Orange County having programs/activities that have an impact on storm water quality. A list of these organizations is included in Attachment C. As such, these organizations should actively participate in implementing the Orange County NPDES Storm Water Program. The Regional Board has the discretion and authority to require certain non-cooperating entities to participate in this areawide permit or obtain individual storm water discharge permits, pursuant to 40 CFR 122.26(a). The permittees have developed a Storm Water Implementation Agreement among the County, the cities and the Orange County Flood Control District. The Implementation Agreement establishes the responsibilities of each party, a funding mechanism for the shared costs, and recognizes the Technical Advisory Committee (TAC).

78. The permittees have developed and implemented programs and policies to address fixed facilities, fertilizer and pesticide use, employee training, storm drain inspection and maintenance activities, and other related planning, inspection and maintenance programs. This order requires the permittees to continue these programs and propose any needed changes to these programs.

79. Some of the permittees own and operate sewage collection systems. Sanitary sewer overflows (SSOs) have been a significant source of water quality impairments and beach closures in Orange County. On May 2, 2006, the State Board adopted Water Quality Order No. 2006-0003 to provide a consistent statewide regulatory approach to address SSOs. In addition, the principal permittee, in collaboration with the Orange County Sanitation District and a number of the co-permittees, has developed the Countywide Area Spill Control Program to address SSOs in certain areas of Orange County. These two programs are expected to address issues related to SSOs.

P. PUBLIC EDUCATION/PARTICIPATION

80. Urban runoff contains pollutants from privately owned and operated facilities, such as residences, businesses, private and/or public institutions, and commercial establishments. Therefore, a successful storm water management plan should include the participation and cooperation of the public, businesses, the permittees and the regulators. The DAMP has a strong emphasis on public education. Public education includes education of the public at large, commercial establishments, industrial facilities and developers. It also includes proper training for municipal planning, inspection and maintenance activities. The permittees have developed

inter-departmental training programs and have made commitments to conduct a certain number of these training programs during the term of this permit.

81. Public education is an important part of storm water pollution prevention. The permittees have employed a variety of means to educate the public, business and commercial establishments, industrial facilities and construction sites, and in 1999 developed a long term public education strategy. In 2002, the permittees created a public and business outreach strategy and developed the "Orange County Stormwater Public Education Program Recommendations." This strategy was updated in 2004 and established a long-term cost-effective approach to educate the public and targeted businesses about the effects of storm water pollution and encourages their participation in protecting water quality. In accordance with this strategy the permittees conducted a public awareness survey and translated relevant public education materials into Spanish and Vietnamese. The permittees employed a variety of media, including newspapers, radio, television, movie theaters, advertisements on public transportation vehicles, schools and printed brochures to provide information regarding storm water pollution and the public's role in controlling it. In addition to the multi-media approach, the permittees have started to work with business establishments such as Home Depot and PetsMart, utilities such as Waste Management and Southern California Edison, organizations such as Chamber of Commerce and Welcome Express, and a number of other organizations and establishments. The permittees also established a countywide 24-hour, bilingual, hotline for reporting illegal activities that could impact water quality. This order requires implementation of LID techniques. If not properly designed and maintained, some of the LID BMPs could provide breeding areas for vectors. Public education and outreach materials should include a discussion on the association between disease vectors, urban runoff, storm water treatment control and LID BMPs.

82. The storm water regulations require public participation in the development and implementation of the storm water management program. As such, the permittees are required to solicit and consider all comments received from the public and submit copies of the comments to the Executive Officer of the Regional Board with the annual reports due on November 15 of each year. It is expected that the permittees would include comments received on any significant revisions to the Monitoring Plan, LIPs and WQMPs. In response to public comments, the permittees may modify reports, plans, or schedules prior to submittal to the Executive Officer.

Q. MONITORING AND REPORTING PROGRAM AND EFFECTIVENESS ASSESSMENT

83. In order to characterize storm water discharges, to identify problem areas, to determine the impact of urban runoff on receiving waters, and to determine the effectiveness of the various BMPs, an effective monitoring program is critical. The principal permittee administers the monitoring program for the permittees. During the previous permit term, the permittees completed the 99-04 Monitoring Plan. This plan included storm water monitoring, receiving water monitoring, dry weather

monitoring and sediment monitoring in previously identified critical aquatic resources areas, as well as, mass emissions monitoring of both wet and dry season flows. On July 1, 2003, the permittees submitted the Third Term Monitoring Plan. This plan was approved by the Executive Officer on July 15, 2005. Monitoring under this plan was expanded to cover monitoring requirements for the development and implementation of TMDLs for impaired waters in Orange County. The Monitoring Plan approved in 2005, included mass emissions monitoring, estuary/wetlands monitoring, bacteriological/pathogen monitoring, bioassessment monitoring, illicit discharge reconnaissance monitoring, and land use correlations. Three different approaches were used for these monitoring programs: core monitoring, regional monitoring, and special studies. The permittees are required to review the monitoring program on an annual basis to determine the need for any revisions. The monitoring program may have to be revised to meet TMDL and ASBS monitoring requirements and/or to make the program consistent with any statewide or regional monitoring guidance developed either by the State Board or the Stormwater Monitoring Coalition.

R. ILLICIT DISCHARGES, ILLICIT CONNECTIONS AND LEGAL AUTHORITY

84. Illicit discharges to the storm drains can contribute to storm water and surface water contamination. A reconnaissance survey of the municipal storm drain systems (open channels and underground storm drains) was completed by the permittees during the third term permit, the permittees significantly enhanced the programmatic framework for detecting and quickly controlling discharges into the MS4s. The permittees have initiated a dry weather monitoring program that is based on statistically derived benchmarks to detect illicit discharges and illicit connections. The program also facilitates public reporting of illicit discharges by providing 24-hour access to a toll free hotline. The program has a number of mechanisms in place to identify and eliminate illicit discharges to the MS4s, including: construction, commercial and industrial facility inspections, drainage facility inspections, water quality monitoring programs, and public education including a 24-hour hotline. The permittees developed a ten module training program for training municipal staff to identify and eliminate illicit discharges to the MS4s and to take appropriate enforcement actions.

85. In order to insure countywide consistency and to provide a legal underpinning to the entire Orange County storm water program, a model water quality ordinance was completed on August 15, 1994 and has been adopted by all the permittees. A countywide Enforcement Consistency Guide was established by the permittees in 1995. These documents establish legal authority for enforcing storm water ordinances and countywide uniformity in the enforcement actions. The permittees have the authority to control pollutants into the MS4s, to prohibit illicit connections and illicit discharges, to control spills, to require compliance with local water quality ordinances and to carry out inspections of the storm drain systems within their jurisdictions.

86. During the third term permit, the principal permittees in collaboration with the Orange County Sanitation District developed and implemented a coordinated sewage spill prevention and response demonstration project. This program is being evaluated for implementation throughout the Orange County Sanitation District's service area.

87. There may be discharges that are not within the permittees jurisdiction. The permittees may petition the Regional Board to issue a separate NPDES permit to any discharger of non-storm water into storm drain systems that they own or operate.

S. COMPLIANCE WITH CZARA, CEQA AND THE ANTI-DEGRADATION POLICY

88. The Coastal Zone Act Reauthorization Amendments of 1990 (CZARA), Section 6217(g), requires coastal states with approved coastal zone management programs to address non-point source pollution impacting or threatening coastal water quality. CZARA addresses five sources of non-point pollution: agriculture, silviculture, urban, marinas, and hydromodification. This order addresses the management measures required for the urban category, with the exception of septic systems. Compliance with requirements specified in this order relieves the permittees for developing a non-point source plan, for the urban category, under CZARA. The Regional Board addresses septic systems through the administration other programs.

89. In accordance with California Water Code Section 13389, the issuance of waste discharge requirements for this discharge is exempt from those provisions of the California Environmental Quality Act contained in Chapter 3 (commencing with Section 21100), Division 13 of the Public Resources Code.

90. The permitted discharge is consistent with the anti-degradation provisions of 40 CFR 131.12 and the State Board Resolution 68-16. This order requires implementation of programs (i.e., BMPs) to reduce the level of pollutants in the storm water discharges. The combination of programs and policies required to be implemented under this order for new and existing developments are designed to improve urban storm water quality.

T. PUBLIC COMMENTS AND PUBLIC HEARING

91. The Regional Board has notified the permittees and interested parties of its intent to issue waste discharge requirements for this discharge and has provided them with an opportunity to submit their written views and recommendations.

92. The Regional Board, in a public hearing, heard and considered all comments pertaining to the discharge and to the tentative requirements.

PERMIT REQUIREMENTS:

IT IS HEREBY ORDERED that the permittees, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Clean Water Act, as amended, and regulations and guidelines adopted thereunder, shall comply with the following:

I. RESPONSIBILITIES OF PRINCIPAL PERMITTEE

A. The principal permittee shall be responsible for the overall program management and shall:

1. Conduct chemical and biological water quality monitoring, as required by this order and any additional monitoring as directed by the Executive Officer.
2. Conduct inspections and maintain the storm drain systems within its jurisdiction.
3. Review and revise, if necessary, policies/ordinances necessary to establish legal authority as required by the Federal Storm Water Regulations.
4. Respond and/or arrange for responding to emergency situations, such as accidental spills, leaks, illicit discharges and illicit connections, etc., to prevent or reduce the discharge of pollutants to storm drain systems and waters of the US within its jurisdiction.
5. Take appropriate enforcement actions for illicit discharges to the MS4 systems owned or controlled by the principal permittee.
6. Prepare and submit to the Executive Officer of the Regional Board unified reports, plans, and programs as required by this order, including the annual report.

B. The activities of the principal permittee shall include, but not be limited to, the following:

1. Coordinate and conduct Management Committee meetings on an as needed basis. The principal permittee will take the lead role in initiating and developing areawide programs and activities necessary to comply with this order.
2. Coordinate permit activities and participate in any subcommittees formed as necessary to coordinate compliance activities with this order.
3. Provide technical and administrative support and inform the co-permittees of the progress of other pertinent municipal programs, pilot projects, research studies, etc.
4. Coordinate the implementation of areawide storm water quality management activities such as public education, pollution prevention, household hazardous waste collection, etc.
5. Develop and implement mechanisms, performance standards, etc., to promote uniform and consistent implementation of BMPs among the permittees.
6. Pursue enforcement actions as necessary within its jurisdiction to ensure compliance with storm water management programs, ordinances and implementation plans, including physical elimination of undocumented connections and illicit discharges.

7. In conjunction with the other permittees, implement the BMPs listed in the DAMP, and take such other actions as may be necessary to meet the MEP standard.
8. Monitor the implementation of the plans and programs required by this order and determine their effectiveness in protecting beneficial uses.
9. Coordinate all the activities with the Regional Board, including the submittal of all reports, plans, and programs, as required under this order.
10. Obtain public input for any proposed management and implementation plans, such as Monitoring Plans, Local Implementation Plans and significant changes to Water Quality Management Plans.
11. Cooperate in watershed management programs and regional and/or statewide monitoring programs.
12. In collaboration with the co-permittees, develop guidelines for defining expertise and competencies of storm water program managers and inspectors and develop and submit for approval a training program for various positions in accordance with these guidelines.

II. RESPONSIBILITIES OF THE CO-PERMITTEES

A. The co-permittees shall be responsible for the management of storm drain systems within their jurisdictions and shall:

1. Implement management programs, monitoring programs, implementation plans and all BMPs outlined in the DAMP/LIP within each respective jurisdiction, and take any other actions as may be necessary to meet the MEP standard.
2. Coordinate among their internal departments and agencies, as appropriate, to facilitate the implementation of this order and the DAMP/LIP.
3. Establish and maintain adequate legal authority, as required by the Federal Storm Water Regulations.
4. Conduct storm drain system inspections and maintenance in accordance with the criteria developed by the principal permittee.
5. Take appropriate enforcement actions for illicit discharges to the MS4 systems owned or controlled by the co-permittee.

B. The co-permittees' activities shall include, but not be limited to, the following:

1. Participate in the Management Committee comprised of the principal permittee and one representative of each co-permittee. The principal permittee will take the lead role in initiating and developing areawide programs and activities necessary to comply with this order. The Committee will meet on a regular basis (at least six times per year). Each permittee shall designate one official representative to the Management Committee and attend at least 75% of the meetings each calendar year.

2. Review, approve, implement, and comment on all plans, strategies, management programs, and monitoring programs, as developed by the principal permittee or any permittee subcommittee to comply with this order.
3. Pursue enforcement actions as necessary to ensure compliance with the storm water management programs, ordinances and implementation plans, including physical elimination of undocumented connections and illicit discharges to drainage systems owned or controlled by the co-permittees.
4. Conduct and coordinate with the principal permittee any surveys and characterizations needed to identify pollutant sources and drainage areas.
5. Submit storm drain system maps, including any periodic revisions, with each annual report.
6. Respond to emergency situations, such as accidental spills, leaks, illicit discharges, illicit connections, etc., to prevent or reduce the discharge of pollutants to storm drain systems and waters of the US.
7. Prepare and submit all required reports to the principal permittee in a timely manner.

III. DISCHARGE LIMITATIONS/PROHIBITIONS

1. In accordance with the requirements of 40 CFR 122.26(d)(2)(i)(B) and 40 CFR 122.26(d)(2)(i)(F), the permittees shall prohibit illicit/illegal discharges (non-storm water) from entering into the municipal separate storm sewer systems unless such discharges are either authorized by a NPDES permit, or not prohibited in accordance with Section III.3, below.
2. The discharge of storm water from the MS4s to waters of the US containing pollutants that have not been reduced to the maximum extent practicable is prohibited.
3. The permittees shall effectively prohibit the discharge of non-storm water into the MS4s, unless such discharges are authorized by a separate NPDES permit or as otherwise specified in this provision. For purposes of this order, a discharge may include storm water or other types of discharges identified below.
    i. The discharges identified below need not be prohibited by the permittees unless such discharges are identified either by the permittees or by the Executive Officer as a significant source of pollutants. The DAMP shall include public education and outreach activities directed at reducing these discharges even if they are not substantial contributors of pollutants to the MS4s.
        a) Discharges composed entirely of storm water;
        b) Air conditioning condensate;
        c) Irrigation water;
        d) Passive foundation drains;
        e) Passive footing drains;

f) Water from crawl space pumps;

g) Non-commercial vehicle washing;

h) Dechlorinated swimming pool discharges (Cleaning wastewater and filter backwash shall not be discharged to the MS4).

i) Diverted stream flows;

j) Rising ground waters and natural springs;

k) Ground water infiltration as defined in 40 CFR 35.2005 (20) and uncontaminated pumped groundwater;

l) Flows from riparian habitats and wetlands;

m) Emergency fire fighting flows (i.e., flows necessary for the protection of life and property) do not require BMPs and need not be prohibited. However, where possible, when not interfering with health and safety issues, BMPs should be implemented (also see Section XXI, Provision 5);

n) Waters not otherwise containing wastes as defined in California Water Code Section 13050 (d); and

o) Other types of discharges identified and recommended by the permittees and approved by the Regional Board.

ii. The permittees shall prohibit the following categories of non-storm water discharges from permittee owned and/or operated facilities and activities unless the stated conditions are met:

a) For discharges outside the Newport Bay watershed the de minimus types of discharges listed in the Regional Board's General De Minimus Permit for Discharges to Surface Waters, Order No. R8-2009-0003, NPDES No. CAG 998001 (General De Minimus Permit), shall be in compliance with the terms and conditions of the General De Minimus Permit. Separate coverage under the General De Minimus Permit is not required. For discharges within the Newport Bay watershed, separate permit authorization for these de minimus discharges will be required when the discharges contain selenium, nitrogen or other pollutants at levels of concern.

b) Discharges from potable water sources, including water line flushing, superchlorinated water line flushing, fire hydrant system flushing, and pipeline hydrostatic test water: Planned discharges shall be dechlorinated to a concentration of 0.1 ppm[31] or less, pH adjusted if necessary, and volumetrically and velocity controlled to prevent causing hydrologic conditions of concern in receiving waters.

[31] Total residual chlorine = 0.1 mg/l or parts per million (ppm) or less; compliance determination shall be at a point before the discharge mixes with any receiving water.

c) Discharges from lawn, greenbelt and median watering and other irrigation runoff from non-agricultural operations[32]: These discharges shall be minimized through a Model Municipal Activity Maintenance Program designed to control irrigation runoff.

d) Dechlorinated swimming pool discharges: Dechlorinated to a concentration of 0.1 ppm[33] or less, pH adjusted and reoxygenated if necessary, and volumetrically and velocity controlled to prevent causing hydrologic conditions of concern in receiving waters. Swimming pool cleaning wastewater and filter backwash shall not be discharged to the MS4s.

e) Construction dewatering wastes: The maximum daily concentration limit for total suspended solids shall not exceed 75mg/l, sulfides 0.4mg/l, oil and grease15mg/l, total petroleum hydrocarbons 0.1mg/l.

f) Discharges from facilities that extract, treat and discharge water diverted from waters of the US: These discharges shall meet the following conditions: (1) The discharges to waters of the US must not contain pollutants added by the treatment process or pollutants in greater concentration than the influent; (2) The discharge must not cause or contribute to a condition of erosion; (3) The extraction and treatment must be in compliance with Section 404 of the Clean Water Act; and (4) Conduct monitoring in accordance with Monitoring and Reporting Program attached to this order.

The Regional Board may add categories of non-storm water discharges that are not significant sources of pollutants or remove categories of non-storm water discharges listed above based upon a finding that the discharges are a significant source of pollutants.

4. Non-storm water discharges from public agency activities into waters of the US are prohibited unless the non-storm water discharges are permitted by an NPDES permit or are included in Section III.3.

5. The permittees shall reduce the discharge of pollutants, including trash and debris, from the storm water conveyance systems to the maximum extent practicable (also see Section VII).

6. Discharges from the MS4s shall be in compliance with the applicable discharge prohibitions contained in Chapter 5 of the Basin Plan.

7. Discharges from the MS4s of storm water or non-storm water, as defined in Section III.3, shall not cause or contribute to a condition of pollution, contamination or nuisance, as those terms are defined in Section 13050 of the Water Code.

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[32] Non-agricultural irrigation using recycled water must comply with the statewide permit for Landscape Irrigation Using Recycled Water and the State Department Health guidelines.

[33] See previous footnote.

8. All discharges to Areas of Special Biological Significance shall be consistent with the Special Protections/Exceptions granted by the State Board, or waste discharges shall be prohibited in accordance with the Ocean Plan.

IV. RECEIVING WATER LIMITATIONS

1. Discharges from the MS4s shall not cause or contribute to exceedances of receiving water quality standards (designated beneficial uses and water quality objectives) for surface waters or groundwaters.
2. The DAMP and its components shall be designed to achieve compliance with receiving water limitations. It is expected that compliance with receiving water limitations will be achieved through an iterative process and the application of increasingly more effective BMPs. The permittees shall comply with Sections III.2 and IV.1 of this order through timely implementation of control measures and other actions to reduce pollutants in urban runoff in accordance with the DAMP and other requirements of this order, including any modifications thereto.
3. If exceedance of water quality standards persist, notwithstanding implementation of the DAMP and other requirements of this order, the permittees shall assure compliance with Sections III.2 and IV.1 of this order by complying with the following procedure:

   a) Upon a determination by either the permittees or the Executive Officer that the discharges from the MS4 systems are causing or contributing to an exceedance of an applicable water quality standard, the permittees shall promptly notify and thereafter submit a report to the Executive Officer that describes BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of water quality standards. The report may be incorporated in the annual update to the DAMP, unless the Executive Officer directs an earlier submittal. The report shall include an implementation schedule. The Executive Officer may require modifications to the report;

   b) Submit any modifications to the report required by the Executive Officer within 30 days of notification;

   c) Within 30 days following approval by the Executive Officer of the report described above, the permittees shall revise the DAMP and monitoring program to incorporate the approved modified BMPs that have been and will be implemented, the implementation schedule, and any additional monitoring required; and,

   d) Implement the revised DAMP and monitoring program in accordance with the approved schedule.

   So long as the permittees have complied with the procedures set forth above and are implementing the revised DAMP, the permittees do not have to repeat the same procedure for continuing or recurring exceedances of the same receiving water

limitations unless the Executive Officer determines it is necessary to develop additional BMPs.

4. Nothing in Section IV.3 must prevent the Regional Board from enforcing any provision of this order while the permittee prepares and implements the above programs.

V. IMPLEMENTATION AGREEMENT

1. Within 6 months of adoption of this order, the existing Implementation Agreement shall be reviewed and revised, if necessary, to include any cities that were not signatories to this agreement. A copy of the signature page and any revisions to the Agreement shall be included in the annual report.
2. Within 6 months of adoption of this order and annually thereafter, the permittees shall evaluate the storm water management structure and the Implementation Agreement and determine the need for any revisions. The corresponding annual report shall include the findings of this review and a schedule for any needed revisions.

VI. LEGAL AUTHORITY/ENFORCEMENT

1. The permittees shall maintain adequate legal authority to control the discharge of pollutants to the MS4s from urban runoff and enforce those authorities. This may be accomplished through ordinance, statute, permit, contract or similar means. Such legal authority must address all illicit connections and illicit discharges into the MS4s, including those from all industrial and construction sites. The permittees may use the Enforcement Consistency Guide or develop its own enforcement program and shall incorporate the enforcement program into their Local Implementation Plan.

2. The permittees shall carry out inspections, surveillance, and monitoring necessary to determine compliance with their ordinances and permits. The Permittees' ordinance must include adequate legal authority, to the extent permitted by California and Federal Law and subject to the limitations on municipal action under the constitutions of California and the United States, to enter, inspect and gather evidence (pictures, videos, samples, documents, etc.) from industrial, construction and commercial establishments. The permittees shall progressively and decisively take enforcement actions against any violators of their Water Quality Ordinance. These enforcement actions must, at a minimum, meet the guidelines and procedures listed in the Enforcement Consistency Guide.
3. Permittees' ordinances or other local regulatory mechanisms shall include sanctions and follow up inspection milestones to ensure compliance. Sanctions shall include, but are not limited to: monetary penalties, non-monetary penalties, bonding requirements, and/or permit denials/revocations/stays for non-compliance. Follow up inspection milestones shall be consistent with applicable sections of this order. Permittees' ordinances shall have a provision for civil or criminal penalties for violations of their water quality ordinances. These penalties shall be issued in a

decisive manner within a predetermined timeframe, from the time of the violation's occurrence and/or respective follow-up inspection.

4. Within one year of the adoption of this order, each permittee shall submit a statement, signed by legal counsel, that the permittee has obtained all necessary legal authority in accordance with 40 CFR 122.26(d)(2)(i)(A-F) and to comply with this order through adoption of ordinances and/or municipal code modifications.
5. If necessary, the permittees shall revise their LIPs to include citations of appropriate local ordinances, identification of departmental jurisdictions in the implementation and enforcement of these ordinances, and key personnel. The LIP shall include procedures and timeframes for progressive enforcement actions.
6. The permittees shall continue to provide notification to Regional Board staff regarding storm water related information gathered during site inspections of industrial and construction sites regulated by the Statewide General Storm Water Permits and at sites that should be regulated under those Statewide General Permits. The notification shall be provided on a quarterly basis[34] and shall include any observed violations, or threat of potential violations of the General Permits (e.g., problematic housekeeping issues) prior history of violations, any enforcement actions taken by the permittee, and any other relevant information. (Also see notification requirements under Sections VIII, IX, and X of this Order.)
7. The permittees shall annually review their water quality ordinances and provide findings within the annual report each year on the effectiveness of these ordinances and associated enforcement programs, in prohibiting the following types of discharges to the MS4s (the permittees may propose appropriate control measures in lieu of prohibiting these discharges, where the permittees are responsible for ensuring that dischargers adequately maintain those control measures):
   a) Sewage (also prohibited under the Statewide SSO order[35]);
   b) Wash water resulting from the hosing or cleaning of gas stations, auto repair garages, and other types of automobile service stations;
   c) Discharges resulting from the cleaning, repair, or maintenance of any type of equipment, machinery, or facility, including motor vehicles, concrete mixing equipment, portable toilet servicing, etc.;
   d) Wash water from mobile auto detailing and washing, steam and pressure cleaning, carpet/upholstery cleaning, pool cleaning and other such mobile commercial and industrial activities;
   e) Water from cleaning of municipal, industrial, and commercial sites, including parking lots, streets, sidewalks, driveways, patios, plazas, work yards and outdoor eating or drinking areas, etc.;

[34] The reporting schedule may be revised with the approval of the Executive Officer.

[35] State Board WQO No. 2006-0003.

f) Runoff from material storage areas or uncovered receptacles that contain chemicals, fuels, grease, oil, or other hazardous materials[36];

g) Discharges of runoff from the washing of toxic materials[37] from paved or unpaved areas;

h) Discharges of pool or fountain water containing chlorine, biocides, or other chemicals; pool filter backwash containing debris and chlorine;

i) Pet waste, yard waste, litter, debris, sediment, etc.; and,

j) Restaurant or food processing facility wastes such as grease, floor mat and trash bin wash water, food waste, etc.

8. The permittees are encouraged to enter into interagency agreements with owners of other MS4 systems, such as Caltrans, school and college districts, universities, Department of Defense, Native American Tribes, etc., to control the contribution of pollutants from one portion of the MS4s to another portion. The Regional Board will continue to notify the owner/operator of the MS4 systems and the local municipality if the Board issues a permit for discharges into the MS4 systems.

VII. ILLICIT DISCHARGES/ILLICIT CONNECTIONS; LITTER, DEBRIS AND TRASH CONTROL

1. The permittees shall continue to prohibit all illicit connections to the MS4s through their ordinances, inspections, monitoring programs, and enforcement actions. The permittees shall conduct inspections for illicit connections and illicit discharges during routine maintenance of all MS4 facilities. If routine inspections or dry weather screening and/or monitoring indicate any illicit connections, they shall be investigated and eliminated or permitted within 120 days of discovery and identification.
2. The permittees shall control the discharge of spills, leaks, or dumping of any materials other than storm water and authorized non-storm water per Section III, above, into the MS4s. All reports of spills, leaks, and/or illegal dumping shall be promptly investigated and reported as specified under Section XVII.
3. Within six months of adoption of this order, the permittees shall evaluate the current Illicit Discharges/Illicit Connections Training Program. If necessary, the program shall be revised to meet the expected expertise and competencies of the municipal inspectors.

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[36] Hazardous material is defined as any substance that poses a threat to human health or the environment due to its toxicity, corrosiveness, ignitability, explosive nature or chemical reactivity. These also include materials named by EPA to be reported if a designed quantity of the material is spilled into the waters of the United States or emitted into the environment.

[37] Toxic material is a chemical or a mixture that may present an unreasonable risk of injury to health or the environment.

4. The permittees shall continue to implement appropriate control measures to reduce and/or to eliminate the discharge of trash and debris to waters of the US. These control measures shall be reported in the annual report.
5. By July 1st of each year the permittees shall review their litter/trash control ordinances to determine the need for any revision. At least once during the permit term, the principal permittee shall characterize trash, determine its main source(s) and develop and implement appropriate BMPs to control trash in urban runoff. The findings of this review shall be included in the annual report.
6. The permittees shall determine the need for any additional debris control measures. The findings shall be included in each annual report.
7. The permittees who are regulated under State Board's Water Quality Order No. 2006-0003 shall continue to comply with that order to control sanitary system overflows. The principal permittee shall continue to evaluate the applicability of the "Countywide Area Spill Control Program (CASC)" to all areas within the Santa Ana Regional Board's jurisdiction to control and mitigate sanitary sewer overflows. This evaluation shall be included in the first annual report due after adoption of this order. Within 12 months of adoption of this order, the principal permittee in collaboration with the Orange County Sanitation District, Irvine Ranch Water District and the co-permittees shall implement essential elements of the CASC or other equally effective programs (such as the Statewide SSO order) to control and mitigate sanitary sewer overflows in Orange County areas that are within the Region.

VIII. MUNICIPAL INSPECTIONS OF CONSTRUCTION SITES

1. Each permittee shall ensure that all construction activities within its jurisdiction are consistent with the Model Construction Program developed by the permittees.
2. Each permittee shall continue to maintain and update (at least on a biannual basis, once in September and the second update in May) an inventory of all construction sites within its jurisdiction for which building or grading permits have been issued and where activities at the site include: soil movement; uncovered storage of materials or wastes, such as dirt, sand or fertilizer; or exterior mixing of cementaceous products, such as concrete, mortar or stucco. All construction sites, as described above, shall be included regardless of whether the construction site is subject to the General Construction Permit or other individual NPDES permit. This inventory shall be maintained in the 2002 Spreadsheet developed by the permittees or a similar computer-based database system and shall include relevant information on site ownership, General Construction Permit WDID number (if any), size, location (latitude/longitude [in decimals] or NAD83/WGS84[38] compatible formatting), inspection data, etc.
3. The permittees shall continue to prioritize construction sites within their jurisdictions as a high, medium or low threat to water quality. Evaluation of construction sites

[38] NAD83/WGS84=North American Datum of 1983 and World Geodetic System of 1984 are systems to define three-dimensional coordinates of a single physical point.

shall be based on factors, which shall include, but not be limited to: soil erosion potential, project size, site slope, proximity to and sensitivity of receiving waters and any other relevant factors. At a minimum, high priority construction sites shall include: sites 20 acres and larger; sites over 1 acre that are tributary to Clean Water Act Section 303(d) waters listed for sediment or turbidity impairments; and sites that are tributary to and within 500 feet of an area defined by the Ocean Plan as an Area of Special Biological Significance (ASBS). At a minimum, medium priority construction sites shall include sites between 5 to 20 acres of disturbed soil.

4. Each permittee shall conduct construction site inspections, subject to limitations on municipal action under the constitutions of California and the United States, for compliance with its ordinances (grading, Water Quality Management Plans, etc.), local permits (construction, grading, etc.), the Model Construction Program and the Construction Runoff Guidance Manual, both developed by the permittees. The permittees must develop a checklist for conducting construction site inspections. Inspections of construction sites shall include, but not be limited to:

   a) Verification of coverage under the General Construction Permit (Notice of Intent or Waste Discharge Identification Number, WDID Number) during the initial inspection;

   b) A documented review of the Erosion and Sediment Control Plan (ESCP) to ensure that the BMPs to be implemented on-site are consistent with the appropriate phase of construction (Preliminary Stage, Mass Grading Stage, Streets and Utilities Stage, etc.);

   c) Visual observation for non-storm water discharges and potential pollutant sources;

   d) Determination of compliance with local ordinances, permits, Water Quality Management Plans, Construction Runoff Guidance Manual and other relevant requirements including the implementation and maintenance of BMPs required under local requirements; and,

   e) An assessment of the effectiveness of BMPs implemented at the site and the need for any additional BMPs.

5. At a minimum, the inspection frequency shall include the following:

   a) During the dry season (i.e., May 1 through September 30 of each year), all construction sites shall be inspected at a frequency sufficient to ensure that sediment and other pollutants are properly controlled and that unauthorized, non-storm water discharges are prevented.

   b) During the wet season (i.e., October 1 through April 30 of each year), all high priority sites are to be inspected, in their entirety, once a month. All medium priority sites are to be inspected at least twice during the wet season. All low priority sites are to be inspected at least once during the wet season. When BMPs or BMP maintenance is deemed inadequate or out of compliance, an

inspection frequency of once every week will be maintained until BMPs and BMP maintenance are brought into compliance.

6. To establish a consistent enforcement program for non-compliant construction sites, the permittees shall enforce their ordinances and permits at all construction sites in a fair, firm and consistent manner. If necessary, the permittees shall revise their LIPs within 12 months of adoption of this order to include a mechanism to notify and to establish a clear and coordinated enforcement linkage for further enforcement action with Regional Board staff. Sanctions for non-compliance must include: a written enforcement order at the time of inspection and other appropriate actions, such as Administrative Compliance Orders, Cease and Desist Orders, Stop Work Orders, Misdemeanor/Infractions, monetary penalties, bonding requirements and/or permit denial or administrative termination.
7. All violations shall be notified as per Section XVII.
8. Each permittee shall respond to complaints received from third parties in a timely manner to ensure that the construction sites are not a source of pollutants in the MS4s and the receiving waters.
9. All construction site inspectors shall be trained in accordance with Section XVI.

IX. MUNICIPAL INSPECTIONS OF INDUSTRIAL FACILTIES

1. Each permittee shall continue to maintain an inventory of industrial facilities within its jurisdiction. All sites that have the potential to discharge pollutants to the MS4 should be included in this inventory regardless of whether the facility is subject to business permits, licensing, the State's General Industrial Permit or other individual NPDES permit. This database must be updated on an annual basis. This inventory must be maintained in a computer-based database system and must include relevant information on ownership, SIC code(s), General Industrial Permit WDID # (if any), size, location, etc. Inclusion of a Geographical Information System (GIS) is required, with latitude/longitude (in decimals) or NAD83/WGS84[39] compatible formatting.
2. To establish priorities for inspection requirements under this order, the permittees shall continue to prioritize industrial facilities within their jurisdiction as a high, medium or low threat to water quality. Continuous evaluation of these facilities should be based on such factors as type of industrial activities (SIC codes), materials or wastes used or stored outside, pollutant discharge potential, facility size, proximity and sensitivity of receiving waters and any other relevant factors. At a minimum, a high priority shall be assigned to: facilities subject to section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA); facilities requiring coverage under the General Industrial Permit; facilities with a high potential for, or history of, unauthorized, non-storm water discharges; and facilities that are tributary to, and within 500 feet of, an area defined by the Ocean Plan as an Area of Special Biological Significance.

[39] See Footnote 38.

3. Each permittee shall conduct industrial facility inspections, subject to limitations on municipal action under the constitutions of California and the United States, for compliance with its ordinances, permits and this order. Inspections shall include a review of material and waste handling and storage practices, written documentation of pollutant control BMP implementation and maintenance procedures and digital photographic documentation for any water quality violations, as well as, evidence of past or present unauthorized, non-storm water discharges and enforcement actions issued at the time of inspection. All high priority facilities identified in Section IX.2 shall be inspected at least once a year and a report on these inspections shall be submitted in the annual report for each year.
4. All medium priority sites are to be inspected at least once every two years; and all low priority sites are to be inspected at least once per permit cycle. In the event that inappropriate material or waste handling or storage practices are observed, or there is evidence of past or present unauthorized, non-storm water discharges, an enforcement order shall be issued and a re-inspection frequency schedule adequate to bring the site into compliance, must be maintained (at a minimum, once a month). Once compliance is achieved, a minimum inspection frequency of once every six months will be maintained for the next calendar year.
5. Each permittee shall continually identify any industrial facilities within their jurisdiction and shall add them to the database, as identified in Section IX.1. Additionally, each facility shall be listed with its respective prioritization in accordance with the specifications identified in Section IX.2, within 15 days from the initial date of discovery of the facility.
6. Information including, at a minimum, inspection dates, inspectors present, the photographic and written results of the inspection and any enforcement actions taken must be maintained in the database identified in Section IX.1 or must be linked to that database. A copy of this database must be provided to the Regional Board with each annual report.
7. Each permittee shall enforce its ordinances and permits at all industrial facilities in accordance with the Enforcement Consistency Guide to maintain compliance with this order. At a minimum, each facility shall be required to implement source control and pollution prevention measures consistent with the BMP Fact Sheets developed by the permittees. Sanctions for non-compliance shall be adequate to bring the site into compliance and must include: an oral or written warning for minor violations at the time of inspection, a written enforcement order for violations that pose a threat to water quality that should include consideration of monetary penalties, bonding requirements and/or permit denial or revocation depending on the severity of the violation and in accordance with the Enforcement Consistency Guide.
8. Regional Board shall be notified of all violations in accordance with Section XVII.
9. Industrial site inspectors shall be trained as stipulated in Section XVI.

10. The permittees need not inspect facilities already inspected by Regional Board staff, if the inspection was conducted within the specified time period[40].

X. MUNICIPAL INSPECTIONS OF COMMERCIAL FACILITIES

1. Each permittee shall continue to maintain and update quarterly an inventory of the types of commercial facilities/businesses listed below within its jurisdiction[41]. As required under the third term permit, this inventory must be maintained in a computer-based database system (Commercial Database) and must include relevant information on ownership, size, location, etc. For fixed facilities, inclusion of a Geographical Information System (GIS), with latitude/longitude (in decimals) or NAD83/WGS84[42] compatible formatting is required. For water quality planning purposes, the permittees should consider using a parcel-level GIS that contains an inventory of the types of facilities/discharges listed below.

   Commercial facilities may include, but may not be limited to[43]:

   a) Transport, storage or transfer of pre-production plastic pellets.
   b) Automobile mechanical repair, maintenance, fueling or cleaning;
   c) Airplane maintenance, fueling or cleaning;
   d) Marinas and boat maintenance, fueling or cleaning;
   e) Equipment repair, maintenance, fueling or cleaning;
   f) Automobile impound and storage facilities;
   g) Pest control service facilities;
   h) Eating or drinking establishments, including food markets and restaurants;
   i) Automobile and other vehicle body repair or painting;
   j) Building materials retail and storage facilities;
   k) Portable sanitary service facilities;
   l) Painting and coating;
   m) Animal facilities such as petting zoos and boarding and training facilities;
   n) Nurseries and greenhouses;
   o) Landscape and hardscape installation;
   p) Pool, lake and fountain cleaning;
   q) Golf courses;
   r) Other commercial sites/sources that the permittee determines may contribute a significant pollutant load to the MS4; and,
   s) Any commercial sites or sources that are tributary to and within 500 feet of an area defined by the Ocean Plan as an Area of Special Biological Significance.

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[40] An appropriate framework for inspection coordination will be developed by Regional Board staff and the permittees.

[41] The inventory update schedule may be revised with the approval of the Executive Officer.

[42] See Footnote 38.

[43] Mobile cleaning services are addressed in X.8, below.

2. Each permittee shall conduct, or require to be completed, inspections of its commercial facilities as indicated below and subject to limitations on municipal action under the constitutions of California and the United States. To establish priorities for inspection, the permittees shall continue to prioritize commercial facilities/businesses within their jurisdiction as a high, medium or low threat to water quality based on such factors as the type, magnitude and location of the commercial activity, potential for discharge of pollutants to the MS4, any history of unauthorized, non-storm water discharges, proximity and sensitivity of receiving waters, material used and wastes generated at the site. Within 12 months of adoption of this order, the permittees shall develop a prioritization and inspection schedule for the commercial facilities in Section X.1 for review and approval by the Executive Officer. Until that plan is approved, the following minimum criteria must be met for prioritization of commercial sites for inspections: 10% of commercial sites (not including restaurants/food markets) must be ranked 'high' and these represent the greatest threat to water quality[44]; 20% of commercial sites (not including restaurants/food markets) must be ranked 'medium'; and, the remainder may be ranked 'low'.

3. Each permittee shall conduct, or require to be completed, commercial facility inspections, at frequencies as determined by the threat to water quality prioritization, for compliance with its ordinances, permits and this order. All high priority sites shall be inspected at least once a year; all medium priority sites shall be inspected at least every two years; and all low priority sites shall be inspected at least once per permit cycle. At a minimum, each facility shall be required to implement source control and pollution prevention measures consistent with the BMP Fact Sheets developed by the permittees. Inspections should include a review of control measures implemented, their effectiveness and maintenance; written and photographic documentation of materials and waste handling and storage practices; evidence of past or present unauthorized, non-storm water discharges; and an assessment of management/employees awareness of storm water pollution prevention measures.

4. In the event that inappropriate material or waste handling or storage practices are observed, or there is evidence of past or present unauthorized, non-storm water discharges, a written enforcement order shall be issued, at the time of inspection, to bring the site into compliance.

5. Information, including inspection dates, inspectors present, the written and photographic documentation results of the inspection and any enforcement actions including mitigative compliance orders must be maintained in the Commercial Database or must be linked to that database. A copy of this database must be provided to the Regional Board with each annual report.

6. Each permittee shall enforce its ordinances and permits at commercial facilities. Sanctions for non-compliance must include: enforcement orders issued at the time of inspections, monetary penalties, bonding requirements and/or permit denial or

[44] Where there are less than 100 commercial sites within a municipality, at least 10 sites must be ranked 'High'.

revocation. Sanctions shall be consistent with methods and protocols established in the Enforcement Consistency Guide.

7. All violations shall be notified as specified in Section XVII.
8. Within 12 months of adoption of this order, the permittees shall develop a mobile business pilot program. The pilot program shall address one category of mobile business from the following list: mobile auto washing/detailing; equipment washing/cleaning; carpet, drape and furniture cleaning; mobile high pressure or steam cleaning. The pilot program shall include at least two notifications of the individual businesses operating within the County regarding the minimum source control and pollution prevention measures that the business must implement. The pilot program shall include outreach materials for the business and an enforcement strategy to address mobile businesses. The permittees shall also develop and distribute the BMP Fact Sheets for the selected mobile businesses. At a minimum, the mobile business Fact Sheets should include: laws and regulations dealing with urban runoff and discharges to storm drains; appropriate BMPs and proper procedure for disposing of wastes generated.
9. The principal permittee shall continue to maintain a restaurant inspection program, or coordinate and collaborate with the Orange County Health Care Agency's restaurant inspection program. The restaurant inspection program shall, at a minimum, continue to conduct annual inspections that address:
   a) Oil and grease disposal to verify that these wastes are not poured onto a parking lot, street or adjacent catch basin;
   b) Trash bin areas to verify that these areas are clean, the bin lids are closed, the bins are not filled with liquid and the bins have not been washed out;
   c) Parking lot, alley, sidewalk and street areas to verify that floor mats, mops, filters and garbage containers are not washed in those areas and that no washwater is poured in those areas or discharged to the MS4;
   d) Parking lot areas to verify that they are cleaned by sweeping, not by hosing down and that the facility operator uses dry methods for spill cleanup; and,
   e) Inspection of existing devices designed to separate grease from wastewater (e.g., grease traps or interceptors) to ensure adequate capacity and proper maintenance is currently performed under the Fats, Oils and Grease (FOG) program (the FOG inspections conducted under the Statewide SSO order (Water Quality Order No. 2006-0003) could be substituted for this inspection).

   All violations of the Water Quality Ordinance should be enforced by the permittees and all violations of the Health and Safety Code should be enforced by the Health Care Agency.
10. All commercial site inspectors shall be trained as specified in Section XVI.

11. The permittees need not inspect facilities already inspected by Regional Board staff if the inspection was conducted within the specified time period[45].

XI. RESIDENTIAL PROGRAM

1. Each permittee shall develop and implement a residential program to reduce the discharge of pollutants from residential facilities to the MS4s consistent with the maximum extent practicable standard so as to prevent discharges from the MS4s from causing or contributing to a violation of water quality standards in the receiving waters.
2. The permittees should identify residential areas and activities that are potential sources of pollutants and develop Fact Sheets/BMPs. At a minimum, this should include: residential auto washing and maintenance activities; use and disposal of pesticides, herbicides, fertilizers and household cleaners; and collection and disposal of pet wastes. The permittees shall encourage residents to implement pollution prevention measures. The permittees should work with sub-watershed groups (e.g., the Serrano Creek Conservancy) to disseminate latest research information, such as the UC Master Gardeners Program[46] and USDA's Backyard Conservation Program[47].
3. The permittees, collectively or individually, shall facilitate the proper collection and management of used oil, toxic and hazardous materials, and other household wastes. Such facilitation should include educational activities, public information activities, and establishment of curbside or special collection sites managed by the permittees or private entities, such as solid waste haulers.
4. Within 18 months of adoption of this order, the permittees shall develop a pilot program to control pollutant discharges from common interest areas and areas managed by homeowner associations or management companies. The permittees should evaluate the applicability of programs such as the Landscape

[45] An appropriate framework for inspection coordination will be developed by Regional Board staff and the permittees.

[46] The UC Master Gardener volunteer program provides gardening and horticulture information to the residents of Orange County through trained volunteers who disseminate University research based scientific information.

[47] Backyard Conservation, Bringing Conservation from the Countryside to Your Backyard, USDA Natural Resources Conservation Service, National Association of Conservation Districts, Wildlife Habitat Council and National Audubon Society.

Performance Certification Program[48] to encourage efficient water use and to minimize runoff[49].

5. The permittees shall enforce their Water Quality Ordinance for all residential areas and activities. The permittees should encourage new developments to use weather-based evapotranspiration (ET) irrigation controllers[50].
6. Each permittee shall include an evaluation of its Residential Program in the annual report starting with the first annual report after adoption of this order.

XII. NEW DEVELOPMENT (INCLUDING SIGNIFICANT RE-DEVELOPMENT)

A. GENERAL REQUIREMENTS:

1. The permittees shall continue to maintain a computerized database to ensure (prior to issuance of any local permits or other approvals) that all construction sites that are required to obtain coverage under the State's General Construction Permit have filed with the State Board a Notice of Intent for coverage under the General Permit.
2. Within 12 months of adoption of this order, the principal permittee, in collaboration with the co-permittees, shall develop a guidance document for the preparation of conceptual or preliminary WQMPs to more effectively ensure that water quality protection, including LID principles, is considered in the earliest phases of a project. Within 18 months of adoption of this order, each permittee shall revise its LIP to be consistent with the guidance. The permittees are encouraged to require submission of a conceptual WQMP as early in the planning process as possible.
3. Each permittee shall minimize the short and long-term impacts on receiving water quality from new developments and significant re-developments, as required in Section XII.B.2., below, by requiring the submittal of a WQMP, emphasizing implementation of LID principles and addressing hydrologic conditions of concern, prior to issuance of any grading or building permits and/or prior to recordation of any subdivision maps.
4. In the first annual report following adoption of this permit, the permittees shall include a summary of their review of the watershed protection principles and policies in their General Plan and related documents (such as Development Standards, Zoning Codes, Conditions of Approval, Development Project Guidance, Local Coastal Plan, etc.) to ensure that these principles and policies,

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[48] For example, see the Metropolitan Water District of Orange County's Evaluation of the Landscape Performance Certification Program, January 2004.

[49] The Residential Runoff Reduction Study, Municipal Water District of Orange County, Irvine Ranch Water District and Metropolitan Water District of Southern California, July 2004.

[50] Westpark Study, Municipal Water District of Orange County, Irvine Ranch Water District and Metropolitan Water District of Southern California, 2001.

including LID principles, are properly considered and are incorporated into these documents. These principles and policies should include, but not be limited to, LID principles discussed in Section XII. C and hydrologic conditions of concern discussed in Section XII. D. Within 6 months of adoption of this order, the principal permittee shall facilitate the formation of a technical advisory committee (TAC) consisting of the Community Development/Planning Department directors of the co-permittees to effectively incorporate watershed protection principles (including LID) and policies during the early stages of a project. The TAC shall meet at least on an annual basis to develop common development standards, zoning codes, conditions of approval and other principles and policies necessary for water quality protection. Each annual report shall include a brief summary of the TAC meetings including its recommendations.

5. Each permittee shall provide the Regional Board with the draft amendment or revision when a pertinent General Plan element or the General Plan is noticed for comment in accordance with Govt. Code § 65350 et seq.

6. The permittees shall review their planning procedures and CEQA document preparation processes at the time of DAMP finalization and no later than 24 months after adoption of this order, to ensure that urban runoff-related issues are properly considered and addressed. If necessary, these processes shall be revised to consider and mitigate impacts to storm water quality. Should findings of the review result in changes to the above processes, the permittee shall include these changes in the LIP and submit a revised copy of the LIP to the Regional Board with the next annual report. The permittees shall ensure that the following potential impacts are considered during CEQA reviews:

   a) Potential impact of project construction on storm water runoff;

   b) Potential impact of project's post-construction activity on storm water runoff;

   c) Potential for discharge of storm water pollutants from areas of material storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas. loading docks or other outdoor work areas;

   d) Potential for discharge of storm water to affect the beneficial uses of the receiving waters;

   e) Potential for significant changes in the flow velocity or volume of storm water runoff to cause environmental harm; and,

   f) Potential for significant increases in erosion of the project site or surrounding areas.

   g) Potential decreases in quality and quantity of recharge to groundwater.

   h) Potential impact of pollutants in storm water runoff from the project site on any 303(d) listed waterbodies.

7. The permittees shall modify the project approval process in conjunction with preparation of the DAMP finalization, consistent with the guidance for conceptual

or preliminary WQMP, to ensure that proper conditions of approval, design specifications and tracking mechanisms are included.

8. The permittees shall train their employees involved with the preparation and/or review of CEQA documents as specified in Section XVI.

B. WATER QUALITY MANAGEMENT PLAN (WQMP) FOR URBAN RUNOFF (FOR NEW DEVELOPMENT/SIGNIFICANT REDEVELOPMENT):

1. The permittees shall annually review the existing structural treatment control and other BMPs for New Developments and submit any changes for review and approval by the Executive Officer. Within 12 months of adoption of this order, the principal permittee shall revise the appropriate tables in the Water Quality Management Plan with the latest information on BMPs and provide additional clarification regarding their effectiveness and applicability.
2. Each permittee shall ensure that an appropriate WQMP is prepared for the following categories of new development/significant redevelopment projects (priority development projects). The WQMP shall be developed in accordance with the approved Model WQMP and shall incorporate LID principles in the WQMP.
   a. All significant redevelopment projects, where significant redevelopment is defined as projects that include the addition or replacement of 5,000 square feet or more of impervious surface on a developed site. Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, original purpose of the facility, or emergency redevelopment activity required to protect public health and safety. Where redevelopment results in the addition or replacement of less than fifty percent of the impervious surfaces of a previously existing developed site, and the existing development was not subject to WQMP requirements, the numeric sizing criteria discussed below applies only to the addition or replacement, and not to the entire developed site. Where redevelopment results in the addition or replacement of more than fifty percent of the impervious surfaces of a previously existing developed site, the numeric sizing criteria applies to the entire development.
   b. New development projects that create 10,000 square feet or more of impervious surface (collectively over the entire project site) including commercial, industrial, residential housing subdivisions (i.e., detached single family home subdivisions, multi-family attached subdivisions (town homes), condominiums, apartments, etc.), mixed-use, and public projects. This category includes development projects on public or private land, which fall under the planning and building authority of the permittees.
   c. Automotive repair shops (with SIC codes 5013, 5014, 5541, 7532-7534, 7536-7539).
   d. Restaurants where the land area of development is 5,000 square feet or more.

e. All hillside developments on 5,000 square feet or more, which are located on areas with known erosive soil conditions or where the natural slope is twenty-five percent or more.

f. Developments of 2,500 square feet of impervious surface or more, adjacent to (within 200 feet) or discharging directly[51] into environmentally sensitive areas, such as areas designated in the Ocean Plan as Areas of Special Biological Significance or waterbodies listed on the CWA Section 303(d) list of impaired waters.

g. Parking lots of 5,000 square feet or more of impervious surface exposed to storm water. Parking lot is defined as a land area or facility for the temporary storage of motor vehicles.

h. Streets, roads, highways and freeways of 5,000 square feet or more of paved surface shall incorporate USEPA guidance, "Managing Wet Weather with Green Infrastructure: Green Streets" in a manner consistent with the maximum extent practicable standard. This category includes any paved surface used for the transportation of automobiles, trucks, motorcycles and other vehicles and excludes any routine road maintenance activities where the footprint is not changed.

i. Retail gasoline outlets of 5,000 or more square feet with a projected average daily traffic of 100 or more vehicles per day.

j. Emergency and public safety projects in any of the above-listed categories may be excluded if the delay caused due the requirement for a WQMP compromises public safety, public health and/or environmental protection.

3. WQMPs shall include BMPs for source control, pollution prevention, site design, LID implementation (see Section C., below) and structural treatment control BMPs. For all structural treatment controls, WQMPs shall identify the responsible party for maintenance of the treatment system, vector minimization and control measures, and a funding source or sources for its operation and maintenance. WQMPs shall include control measures for any listed pollutant[52] to an impaired waterbody on the 303(d) list such that the discharge shall not cause or contribute to an exceedance of receiving water quality objectives. The permittees shall require the following source control BMPs for each priority development project, unless formally substantiated as unwarranted in a written submittal to the permittee:

a) Minimize contaminated runoff, including irrigation runoff, from entering the MS4s;

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[51] Discharging directly means a drainage or conveyance which carries flows entirely from the subject development and not commingled with any other flows.

[52] For a waterbody listed under Section 303(d) of the Clean Water Act, the pollutant that is causing the impairment is the "listed pollutant".

b) Provide appropriate secondary containment and/or proper covers or lids for materials storage, trash bins, and outdoor processing and work areas;

c) Minimize storm water contact with pollutant sources;

d) Provide community car wash and equipment wash areas that discharge to sanitary sewers;

e) Minimize trash and debris in storm water runoff through regular street sweeping and through litter control ordinances.

f) The pollutants in post-development runoff shall be reduced using controls that utilize best management practices, as described in the California Stormwater Quality Handbooks, Caltrans Storm Water Quality Handbook or other reliable sources.

4. At a minimum, structural BMPs shall be designed and built in accordance with the approved model WQMP and must be sized to comply with one of the following numeric sizing criteria:

A. Volume

Volume–based BMPs shall be designed to infiltrate, filter, or treat either:

1) The volume of runoff produced from a 24-hour, 85th percentile storm event, as determined from the County of Orange's 85th Percentile Precipitation Isopluvial Map[53]; or,

2) The volume of annual runoff produced by the 85th percentile, 24-hour rainfall event, determined as the maximized capture storm water volume for the area, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87 (1998); or,

3) The volume of annual runoff based on unit basin storage volume, to achieve 80% or more volume treatment by the method recommended in California Stormwater Best Management Practices Handbook – Industrial/Commercial; or,

4) The volume of runoff, as determined from the local historical rainfall record, that achieves approximately the same reduction in pollutant loads and flows as achieved by mitigation of the 85th percentile, 24-hour runoff event;

OR

B. Flow

Flow-based BMPs shall be designed to infiltrate, filter, or treat either:

1) The maximum flow rate of runoff produced from a rainfall intensity of 0.2 inch of rainfall per hour, for each hour of a storm event; or,

[53] The isopluvial map is available from: http://www.ocwatersheds.com/StormWater/PDFs/2003 DAMP Section 7 New Development Significant Redevelopment.pdf.

2) The maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity, as determined from the local historical rainfall record, multiplied by a factor of two; or,

3) The maximum flow rate of runoff, as determined from the local historical rainfall record, which achieves approximately the same reduction in pollutant loads and flows as achieved by mitigation of the 85th percentile hourly rainfall intensity multiplied by a factor of two.

5. To protect ground water resources any structural infiltration BMPs shall meet the following minimum requirements:

   a) Use of structural infiltration treatment BMPs shall not cause or contribute to an exceedance of groundwater water quality objectives.

   b) Source control and pollution prevention control BMPs shall be implemented in conjunction with structural infiltration BMPs to protect groundwater quality. The need for sedimentation or filtration should be evaluated prior to infiltration.

   c) Structural infiltration treatment BMPs shall not cause a nuisance or pollution, as defined in Water Code Section 13050.

   d) The vertical distance from the bottom of the infiltration system to the seasonal high groundwater must be at least 10 feet. Where the groundwater basins do not support beneficial uses, this vertical distance criteria may be reduced, provided groundwater quality is maintained.

   e) The infiltration systems must be located at least 100 feet horizontally from any water supply wells.

   f) Infiltration systems must not be used for areas of industrial or light industrial activity; areas subject to high vehicular traffic (25,000 or more daily traffic) automotive repair shops; car washes; fleet storage areas; nurseries; or any other high threat to water quality land uses or activities[54].

   g) Within 18 months of adoption of this order, the principal permittee shall develop a pilot program to monitor the impact of groundwater infiltration systems on the quality of groundwater. This monitoring program may be conducted by: (1) analyzing the quality of the runoff prior to infiltration; (2) by monitoring the quality of the infiltrate through the vadose zone; or (3) by monitoring groundwater quality upstream and downstream of the infiltration systems. The results of the pilot study shall be submitted with the next annual report.

6. Within 12 months from the date of adoption of this order, the principal permittee shall develop recommendations for streamlining regulatory agency approval of

[54] This restriction applies only to sites that are known to have soil and/or groundwater water contamination. Recent studies by the Los Angeles and San Gabriel Watershed Council of Storm Water Recharge has shown that there is no statistically significant degradation of groundwater quality from the infiltration of storm water-borne constituents.

regional treatment control BMPs. The recommendations should include information needed to be submitted to the Regional Board for consideration of regional treatment control BMPs. At a minimum, it should include: BMP location; type and effectiveness in removing pollutants of concern; projects tributary to the regional treatment system; engineering design details; funding sources for construction, operation and maintenance; and parties responsible for monitoring effectiveness, operation and maintenance.

7. The permittees shall require non-priority development projects to document, via a WQMP or similar mechanism, site design, source control and any other BMPS which may or may not include treatment control BMPs.

C. LOW IMPACT DEVELOPMENT TO CONTROL POLLUTANTS IN URBAN RUNOFF FROM NEW DEVELOPMENT/SIGNIFICANT REDEVELOPMENT:

1. Within 12 months of adoption of this order, the permittees shall update the model WQMP to incorporate LID principles (as per Section XII.C) and to address the impact of urbanization on downstream hydrology (as per Section XII.D) and a copy of the updated model WQMP shall be submitted for review and approval by the Executive Officer[55]. As provided in Section XII.J, 90 days after approval of the revised model WQMP, priority development projects shall implement LID principles described in this section, Section XII.C. To the extent that the Executive Officer has not approved the feasibility criteria within 18 months of adoption of this order as provided in Section XII.E.1, the infeasibility of implementing LID BMPs shall be determined through project specific analyses, each of which shall be submitted to the Executive Officer, 30 days prior to permittee approval.
2. The permittees shall reflect in the WQMP and otherwise require that each priority development project infiltrate, harvest and re-use, evapotranspire, or bio-treat[56] the 85th percentile storm event ("design capture volume"), as specified in Section XII.B.4.A.1, above. Any portion of the design capture volume that is not infiltrated, harvested and re-used, evapotranspired or bio-treated[57] onsite by LID BMPs shall be treated and discharged in accordance with the requirements set forth in Section XII.C.7 and/or Section XII.E, below.

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[55] The Executive Officer shall provide members of the public with notice and at least a 30-day comment opportunity for all documents submitted in accordance with this order. If the Executive Officer, after considering timely submitted comments, concludes that the document is adequate or adequate with specified changes, the Executive Officer may approve the document or present it to the Board for its consideration at a regularly scheduled and noticed meeting. If there are significant issues that cannot be resolved by the Executive Officer, the document will be presented to the Board for its consideration at a regularly scheduled meeting.

[56] A properly engineered and maintained bio-treatment system may be considered only if infiltration, harvesting and reuse and evapotranspiration cannot be feasibly implemented at a project site (feasibility criteria will be established in the model WQMP [Section XII.C.1] and the technically-based feasibility criteria [Section XII.E.1]). Specific design, operation and maintenance criteria for bio-treatment systems shall be part of the model WQMP that will be produced by the permittees.

[57] For all references to bio-treat/bio-treatment, see footnote 56.

3. The permittees shall incorporate LID site design principles to reduce runoff to a level consistent with the maximum extent practicable standard during each phase of priority development projects. The permittees shall require that each priority development project include site design BMPs during development of the preliminary and final WQMPs. The design goal shall be to maintain or replicate the pre-development hydrologic regime through the use of design techniques that create a functionally equivalent post-development hydrologic regime through site preservation techniques and the use of integrated and distributed micro-scale storm water infiltration, retention, detention, evapotranspiration, filtration and treatment systems as close as feasible to the source of runoff. Site design considerations shall include, but not be limited to:

   a) Limit disturbance of natural water bodies and drainage systems; conserve natural areas; preserve trees; minimize compaction of highly permeable soils; protect slopes and channels; and minimize impacts from storm water and urban runoff on the biological integrity of natural drainage systems and water bodies;

   b) Minimize changes in hydrology and pollutant loading; require incorporation of controls, including structural and non-structural BMPs, to mitigate the projected increases in pollutant loads and flows; ensure that post-development runoff durations and volumes from a site have no significant adverse impact on downstream erosion and stream habitat; minimize the quantity of storm water directed to impermeable surfaces and the MS4s; minimize paving, minimize runoff by disconnecting roof leader and other impervious areas and directing the runoff to pervious and/or landscaped areas, minimize directly connected impervious areas; design impervious areas to drain to pervious areas; consider construction of parking lots, walkways, etc., with permeable materials; minimize pipes, culverts and engineered systems for storm water conveyance thereby minimizing changes to time of concentration on site; utilize rain barrels and cisterns to collect and re-use rainwater; maximize the use of rain gardens and sidewalk storage; and maximize the percentage of permeable surfaces distributed throughout the site's landscape to allow more percolation of storm water into the ground;

   c) Preserve wetlands, riparian corridors, vegetated buffer zones and establish reasonable limits on the clearing of vegetation from the project site;

   d) Use properly designed and well maintained water quality wetlands, bio-retention areas, filter strips and bio-filtration swales; consider replacing curbs gutters and conventional storm water conveyance systems with bio-treatment systems, where such measures are likely to be effective and technically and economically feasible;

   e) Provide for appropriate permanent measures to reduce storm water pollutant loads in storm water from the development site;

   f) Establish development guidelines for areas particularly susceptible to erosion and sediment loss;

g) Implement effective education programs to educate property owners to use pollution prevention measures and to maintain on-site hydrologically functional landscape controls; and

h) During the early planning stages of a project, the LID principles shall be considered to address pollutants of concern identified in the Watershed Action Plans and TMDL Implementation Plans, and the LID BMPs shall be incorporated into the sites conceptual WQMP.

4. The selection of LID principles shall be prioritized in the following manner (from highest to the lowest priority): (1) Preventative measures (these are mostly non-structural measures, e.g., preservation of natural features to a level consistent with the maximum extent practicable standard; minimization of runoff through clustering, reducing impervious areas, etc.) and (2) Mitigation (these are structural measures, such as, infiltration, harvesting and reuse, bio-treatment, etc. The mitigation or structural site design BMPs shall also be prioritized (from highest to lowest priority): (1) Infiltration (examples include permeable pavement with infiltration beds, dry wells, infiltration trenches, surface and sub-surface infiltration basins. All infiltration activities should be coordinated with the groundwater management agencies, such as the Orange County Water District); (2) Harvesting and Re-use (e.g., cisterns and rain barrels); and (3) Bio-treatment such as bio-filtration/bio-retention.

5. Even though the LID principles are universally applicable, there could be constraining factors, such as: soil conditions, including soil compaction, saturation (e.g., hydric soils) and permeability, groundwater levels, soil and/or groundwater contaminants (Brownfield developments), space restrictions (in-fill projects, redevelopment projects, high density development, transit-oriented developments), naturally occurring contaminants (e.g., selenium in the soil and the groundwater in the Newport Bay Watershed), etc. In such cases, the LID principles could be integrated into other programs, such as: Smart Growth[58], New Urbanism[59] or regional or sub-watershed management approaches. Also see Section E, below, for alternatives and in-lieu programs.

6. The LID BMPs shall be designed to mimic pre-development site hydrology through technically and economically feasible preventive and mitigative site design techniques. LID combines hydrologically functional site design with pollution prevention methods to compensate for land development impact on hydrology and water quality.

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[58] Smart Growth refers to the use of creative strategies to develop ways that preserve natural lands and critical environmental areas, protect water and air quality, and reuse already-developed land.

[59] New Urbanism is somewhat similar to Smart Growth and is based on principles of planning and architecture that work together to create human-scale, walkable communities that preserve natural resources.

7. If site conditions do not permit infiltration, harvesting and re-use, and/or evapotranspiration, and/or bio-treatment of the design capture volume at the project site as close to the source as possible, the alternatives discussed below should be considered and the credits and in-lieu programs discussed under Section E, below, may be considered:

   a. Implement LID principles at the project site. This is the preferred approach. For example, in a single family residential development: connect roof drains to a landscaped area, divert driveway runoff to a vegetated strip and minimize any excess runoff generated from the development. The pervious areas to which the runoff from the impervious areas are connected should have the capacity to infiltrate, harvest, evapotranspire and/or bio-treat and re-use at least the design capture volume.

   b. Implement as many LID principles as possible at the project site close to the point of storm water generation and infiltrate and/or harvest and re-use at least the design capture volume through designated infiltration/treatment areas elsewhere within the project site. For example, at a condominium development: connect the roof drains to landscaped areas, construct common parking areas with pervious asphalt with a sub-base of rocks or other materials to facilitate percolation of storm water, direct road runoff to curbless, vegetated sidewalks. The pervious areas which receive runoff from impervious areas should have the capacity to infiltrate, harvest and re-use, evapotranspire and/or bio-treat at least the design capture volume.

   c. Implement LID on a sub-regional basis. For example, at a 100 unit high density housing unit with a small strip mall and a school: connect all roof drains to vegetated areas (if there are any vegetated areas, otherwise storm water storage and reuse may be considered or else divert to the local storm water conveyance system, to be conveyed to the local treatment system), construct a storm water infiltration gallery below the school playground to infiltrate and/or harvest and re-use the design capture volume. The pervious areas to which the runoff from the impervious areas are connected should have the capacity to infiltrate, harvest and re-use, evapotranspire and/or bio-treat at least the design capture volume. (Also see discussion on hydrologic conditions of concern, below.)

   d. Implement LID on a regional basis. For example, several developments could propose a regional system to address storm water runoff from all the participating developments. The pervious areas to which the runoff from the impervious areas are connected should have the capacity to infiltrate, harvest and re-use, evapotranspire and/or bio-treat at least the design capture volume from the entire tributary area. (Also see discussion on hydrologic conditions of concern, below.)

D. HYDROLOGIC CONDITIONS OF CONCERN (HYDROMODIFICATION[60])

1. Each priority development project shall be required to ascertain the impact of the development on the site's hydrologic regime and include the findings in the WQMP, including the following for a two-year frequency storm event:

   a) Increases in runoff volume;

   b) Decreases in infiltration;

   c) Changes in time of concentration;

   d) Potential for increases in post development downstream erosion; and,

   e) Potential for adverse downstream impacts on physical structure, aquatic and riparian habitat.

2. The project does not have a hydrologic condition of concern if any one of the following conditions is met:

   a) The volumes and the time of concentration of storm water runoff for the post-development condition do not significantly exceed those of the pre-development condition for a two-year frequency storm event (a difference of 5% or less is considered insignificant). This may be achieved through site design and source control BMPs.

   b) All downstream conveyance channels that will receive runoff from the project are engineered, hardened and regularly maintained to ensure design flow capacity, and no sensitive stream habitat areas will be affected.

   c) The site infiltrates at least the runoff from a two-year storm event. The permittees may request for a variance from these criteria, based on studies conducted by the Storm Water Monitoring Coalition, Southern California Coastal Water Research Project, or other regional studies. Requests for consideration of any variances should be submitted to the Executive Officer.

3. If a hydrologic condition of concern exists, then the WQMP shall include an evaluation of whether the project will adversely impact downstream erosion, sedimentation or stream habitat. This evaluation should include a hydrograph with pre- and post-development time of concentration for a 2-year frequency storm event. If the evaluation determines adverse impacts are likely to occur, the project proponent shall implement additional site design controls, on-site management controls, structural treatment controls and/or in-stream controls to mitigate the impacts. The project proponent should first consider site design controls and on-site controls prior to proposing in-stream controls; in-stream controls must not adversely impact beneficial uses or result in sustained degradation of water quality of the receiving waters.

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[60] Hydromodification is the alteration of natural flow characteristics.

4. The project proponent may also address hydrologic conditions of concern by mimicking the pre-development hydrograph with the post-development hydrograph, for a two year return frequency storm. Generally, the hydrologic conditions of concern are not significant, if the post-development hydrograph is no more than 10% greater than pre-development hydrograph. In cases where excess volume cannot be infiltrated or captured and reused, discharge from the site must be limited to a flow rate no greater than 110% of the pre-development 2-year peak flow.

5. The permittees shall address the hydrologic conditions of concern on a watershed basis by preparing a Watershed Master Plan as described below:

   The Watershed Master Plans shall integrate water quality, hydromodification, water supply, and habitat for the following watersheds: Coyote Creek-San Gabriel River; Anaheim Bay-Huntington Harbour; Santa Ana River; and Newport Bay-Newport Coast. Components of the Plan shall include: (1) maps to identify areas susceptible to hydromodification including downstream erosion, impacts on physical structure, impacts on riparian and aquatic habitats and areas where storm water and urban runoff infiltration is possible and appropriate; and, (2) a hydromodification model to make available as a tool to enable proponents of land development projects to readily select storm water preventive and mitigative site BMP measures.

   The maps shall be prepared within 12 months of the adoption of this order and a model Plan for one watershed shall be prepared within 24 months of adoption of this order. The model Plan should specify hydromodification management standards for each sub-watershed and provide assessment tools. In the preparation of the model Plan, the permittees are encouraged to use currently available information from other sources such as: (1) Orange County Flood Control Master Plan; (2) Irvine Ranch Water District's Natural Treatment System Master Plan; (3) Orange County Watershed Plans; (4) Nutrient and Selenium Management Program; (5) TMDL and 303(d) Listing information from the U.S. EPA and/or the Regional Board, and (6) and water districts.

   The model Watershed Master Plan shall be submitted to the Executive Officer for approval. Watershed Master Plans shall be completed for all watersheds 24 months after approval of the model Watershed Master Plan.

   The Watershed Master Plans shall be designed to meet applicable water quality standards and the Federal Clean Water Act.

E. ALTERNATIVES AND IN-LIEU PROGRAMS

1. Within 12 months of adoption of this order, the principal permittee, in collaboration with the co-permittees, shall develop technically-based feasibility criteria for project evaluation to determine the feasibility of implementing LID BMPs (feasibility to be based in part, on the issues identified in Section XII.C). This plan shall be submitted to the Executive Officer for approval. Only those projects that have completed a vigorous feasibility analysis as per the criteria developed by the permittees and approved by the Executive Officer should be considered for alternatives and in-lieu programs. If a particular BMP is not technically feasible, other BMPs should be implemented to achieve the same

level of compliance, or if the cost of BMP implementation greatly outweighs the pollution control benefits, a waiver of the BMPs may be granted. All requests for waivers, along with feasibility analysis including waiver justification documentation, must be submitted to the Executive Officer in writing, 30 days prior to permittee approval.

2. The permittees may collectively or individually propose to establish an urban runoff fund to be used for urban water quality improvement projects within the same watershed that is funded by contributions from developers granted waivers. The contributions should be at least equivalent to the cost savings for waived projects and the urban runoff fund shall be expended for water quality improvement or other related projects approved by the Executive Officer within two years of receipt of the funds. If a waiver is granted and an urban runoff fund is established, the annual report for the year should include the following information with respect to the urban runoff fund:

   a) Total amount deposited into the funds and the party responsible for managing the urban runoff fund;

   b) Projects funded or proposed to be funded with monies from the urban runoff fund;

   c) Party or parties responsible for design, construction, operation and maintenance of urban runoff funded projects; and

   d) Current status and a schedule for project completion.

3. The obligation to install structural treatment control BMPs at a new development is met if, for a common plan of development, BMPs are constructed with the requisite capacity to serve the entire common project, even if certain phases of the common project may not have BMP capacity located on that phase in accordance with the requirements specified above. The goal of the WQMP is to develop and implement practicable programs and policies to minimize the effects of urbanization on site hydrology, urban runoff flow rates, velocities and pollutant loads. This goal may be achieved through watershed-based structural treatment controls, in combination with site-specific BMPs. All treatment control BMPs should be located as close as possible to the pollutant sources, should not be located within waters of the US, and pollutant removal should be accomplished prior to discharge to waters of the US. Regional treatment control BMPs shall be operational prior to occupation of any of the priority project sites tributary to the regional treatment BMP.

4. The permittees may establish a water quality credit system for alternatives to infiltration, harvesting and reuse, evapotranspiration, and other LID BMPs and hydromodification requirements specified above. A summary of any waivers of LID, hydromodification and treatment control BMPs should be included in the annual report for each year. Any credit system that the permittees establish

should be submitted to the Executive Officer for review and approval. The following types of projects may be considered for the credit system:

a) Redevelopment projects that reduce the overall impervious footprint

b) Brownfield redevelopment

c) High density developments (>7 units per acre)

d) Mixed use and transit-oriented development (within ½ mile of transit)

e) Dedication of undeveloped portions of the project to parks, preservation areas and other pervious uses

f) Regional treatment systems with a capacity to treat flows from all upstream developments

g) Contribution to an urban runoff fund (see 1, above)

h) Offsite mitigation or dedications within the same watershed

i) City Center area

j) Historic Districts and Historic Preservation areas

k) Live-work developments

l) In-fill projects

F. APPROVAL OF WQMPs

1. The permittees shall utilize a mechanism for review and approval of WQMPs, including a checklist that incorporates the minimum requirements from the model WQMP.
2. The permittees shall maintain a database to track all structural treatment control BMPs, including the location of BMPs, parties responsible for construction, operation and maintenance (also see I.3, below).
3. The permittees shall train those involved with WQMP reviews in accordance with Section XVI, Training Requirements.

G. FIELD VERIFICATION OF BMPS

1. The permittees shall establish and implement a mechanism (a checklist or other tools) to verify that treatment control BMPs are designed and constructed in accordance with the approved WQMP.
2. Prior to occupancy of each priority development project, the permittees shall field verify that the site design, source control and treatment control BMPs have been implemented in accordance with the approved WQMP.
3. Prior to occupancy, the permittees shall verify through visual observation, that the BMPs are operating and functional.
4. The permittees may accept self-certification or third-party certification of BMPs from State licensed professional engineers.

H. CHANGE OF OWNERSHIP AND RECORDATION

1. The permittees shall establish a mechanism not only to track treatment control BMPs, but also to ensure that appropriate easements and ownerships are properly recorded in public records at the County and/or the city and the information is conveyed to all appropriate parties when there is a change in project or site ownership.

I. OPERATION AND MAINTENANCE OF POST-CONSTRUCTION BMPS

1. The permittees shall ensure that all structural treatment control BMPs are designed and implemented with control measures necessary to effectively minimize the creation of nuisance or pollution associated with vectors, such as mosquitoes, rodents, flies, etc. The permittees should consult the Orange County Vector Control District to ensure that structural treatment control systems are designed to minimize the potential for vector breeding. The operation and maintenance plans for all post-construction structural treatment controls should include specific vector control mitigation measures to avoid and/or minimize vector breeding.
2. The permittees shall specify conditions of approval that require proper maintenance and operation of all structural treatment control BMPs installed in new developments, including requirements for vector control. The parties responsible for the long-term maintenance and operation of the structural treatment control BMPs for the life of the project and a funding mechanism for operation and maintenance, shall be identified prior to approval of the WQMP.
3. The permittees shall develop a database with information regarding each structural treatment control BMP installed after adoption of this order. At a minimum, it should include: type of BMP, watershed where it is located, date of construction, party responsible for maintenance, source of funding for operation and maintenance, maintenance verification, and any problems identified during inspections including any vector or nuisance problems. If vector or nuisance problems are identified, the site should be referred to the Orange County Vector Control District. The permittees should work with the Vector Control District to remedy the problems associated with vectors.
4. The annual report shall include a list of all structural treatment control BMPs approved, constructed and/or operating within each permittee's jurisdiction.
5. Within 12 months of adoption of this order and annually thereafter, all public agency structural treatment control BMPs, and at least 25% of priority development project structural treatment control BMPs, shall be inspected prior to the rainy season. All structural treatment control BMPs shall be inspected within every four year period. The permittees shall ensure that the BMPs are operating and are maintained properly and all control measures are working effectively to remove pollutants in runoff from the site. All inspections shall be documented and kept as permittee record. The permittees may accept inspections conducted and certified by state licensed professional engineers in lieu of permittee inspections.

J. PRE-APPROVED PROJECTS

1. The above provisions for LID and hydrologic conditions of concern are not applicable to projects that have an approved Water Quality Management Plan. The above provisions shall be implemented in a manner consistent with the maximum extent practicable standard for all other projects 90 days from the date of approval of the revised model WQMP (per Section XII.C.1). The Regional Board recognizes that full implementation may not be feasible for certain projects which have received tentative tract or parcel map or other discretionary approvals.

XIII. PUBLIC EDUCATION AND OUTREACH

1. The permittees shall continue to implement the public education efforts already underway and shall implement the most effective elements of the comprehensive public and business education strategy contained in the Report of Waste Discharge/DAMP. By July 1, 2012, the permittees shall complete a public awareness survey to determine the effectiveness of the current public and business education strategy and any need for changes to the current multimedia public education efforts. The findings of the survey and any proposed changes to the current program shall be included in the annual report for 2011-2012.
2. The permittees shall sponsor or staff a storm water table or booth at community, regional, and/or countywide events to distribute public education materials to the public. Each permittee shall participate in at least one event per year.
3. The permittees shall continue to participate in the Public Education Committee to review and update existing guidance for the implementation of the public education program. The Public Education Committee shall meet at least twice per year. The Public Education Committee shall continue to make recommendations for any changes to the public and business education program including: how to make the multimedia efforts more effective; a reevaluation of audiences and key messages for targeted behaviors; and opportunities for participation in regional and statewide public education efforts. The goal of the public and business education program shall be to target 100% of the residents, including businesses, commercial and industrial establishments. Through use of local print, radio and television, the permittees must ensure that the public and business education program makes a minimum of 10 million impressions per year and that those impressions measurably increase the knowledge and measurably change the behavior of the targeted groups.
4. The permittees shall continue their outreach and other public education activities. Each permittee should try to reach the following sectors: manufacturing facilities; mobile service industry; commercial, distribution and retail sales industry; residential/commercial landscape construction and services industry; residential and commercial construction industry; and residential and community activities. Individual workshops (or regional workshops) for each of the aforementioned elements shall be administered by each permittee (or on a countywide basis) by July 1, 2010 and on an annual basis thereafter. Commercial and industrial facility inspectors shall distribute developed educational information (Fact Sheets) to these facilities during inspections.

Further, for restaurant, automotive service centers and gasoline service station corporate chains, new information or that which has been previously developed shall be provided to corporate environmental managers during outreach visits that should take place twice during the permit term. Some of these outreach activities could be conducted through the chamber of commerce or other similar establishments. The outcomes from all outreach requirements contained herein shall be reported in the applicable annual reports.

5. The permittees shall further develop and maintain public education materials to encourage the public to report illegal dumping and unauthorized, non-storm water discharges from residential, industrial, construction and commercial sites into public streets, storm drains and to surface waterbodies and their tributaries; clogged storm drains; faded or missing catch basin stencils and general storm water and BMP information. Hotline and web site information shall be included in the public and business education program and shall be listed in the governmental pages of all regional phone books and on the permittees' website.

6. Within 12 months from the date of adoption of this order, the permittees shall further develop and maintain BMP guidance for the control of those potentially polluting activities identified during the previous permit cycle, which are not otherwise regulated by any agency, including guidelines for the household use of fertilizers, pesticides, herbicides and other chemicals, and guidance for mobile vehicle maintenance, carpet cleaners, commercial landscape maintenance, and pavement cutting. These guidance documents shall be distributed to the public, trade associations, etc., through participation in community events, trade association meetings and/or by mail.

7. The principal permittee, in collaboration with the co-permittees, shall develop and implement a mechanism for public participation in the updating and implementation of the Drainage Area Management Plans, monitoring plans, Water Quality Management Plan guidance and Fact Sheets for various activities. The public shall be informed of the availability of these documents through public notices in local newspapers, County and/or city websites, local libraries/city halls and/or courthouses.

XIV. MUNICIPAL FACILITIES/ACTIVITIES

1. The permittees shall continue to implement the Model Municipal Activities Program developed by the permittees for fixed facilities, field operations and drainage facilities to ensure that public agency facilities and activities do not cause or contribute to a pollution or nuisance in receiving waters. By July 1 of each year, the permittees shall review all their activities and facilities to determine the need for any revisions to the facility inventories, prioritization, and maintenance programs. The annual report shall include the findings of this review and a schedule for any needed revisions. All revisions should consider a pollution prevention strategy to ensure that the public agency facilities and/or activities that are currently not required to obtain coverage under the State's general storm water permits reduce the discharge of pollutants into waters of the US to the maximum extent practicable.

2. The permittees shall continue to implement BMPs as per the Fact Sheets developed by the permittees for fixed facilities, field programs and drainage facilities for public

agency and contract field operations and maintenance staff. A reporting of these activities shall be included in each annual report.

3. The permittees shall conduct inspections of open channel systems at least on an annual basis and record the findings in the inspection forms developed by the permittees. At a minimum the following municipal areas should be inspected:

   a) Parking facilities;

   b) Flood management and storm water conveyance systems (open channels);

   c) Areas or facilities discharging directly to lagoons, the ocean, or environmentally sensitive areas such as 303(d) listed waterbodies and Areas of Special Biological Significance; and

   d) Municipal landfills, solid waste transfer facilities, land application sites, corporate yards, sewage collection and treatment facilities, parks and recreation facilities including golf courses, and airfields.

4. All applicable public agency staff shall be trained as specified under Section XVI.

5. In collaboration with the University of California Cooperative Extension and consistent with the Model Integrated Pest Management, Pesticide and Fertilizer Management Guidelines, the permittees shall:

   a) Conduct annual integrated pest management self-audits;

   b) Implement the Model Integrated Pest Management, Pesticide and Fertilizer Guidelines;

   c) Provide proper training to municipal and contract staff involved in the above activities;

   d) Within one year of adoption of this order, revise the LIP to include an integrated pest management program.

6. The permittees shall evaluate the need for any revisions to the Integrated Pest Management, Pesticide and Fertilizer Management Guidelines and determine the need for developing pesticide use indicators.

7. Within one year of adoption of this order, the principal permittee shall evaluate the effectiveness of debris booms and determine if additional debris booms are needed to address floatables in inland streams. This evaluation should also include an evaluation of other control measures such as more effective street sweeping program, litter control measures, and drain inlet screens and /or other inlet controls.

8. Within twelve months of adoption of this order, the principal permittee shall develop an intragency agreement with the County Integrated Waste Management Department to ensure that household solid and hazardous waste collection, transfer and disposal practices do not cause or contribute to a water quality problem.

9. The permittees shall ensure that their flood management processes and projects do not contribute pollutants to receiving waters to the MEP.

10. Each permittee shall examine opportunities to retrofit existing storm water conveyance systems and parks and other recreational areas with water quality protection measures, where feasible. The 2005 RBF Retrofit Study may be used by the principal permittee for a system-wide evaluation in lieu of each permittee conducting its own evaluation. Within 12 months of adoption of this order, the principal permittee shall

submit a proposal for additional retrofit studies that incorporates opportunities for addressing any applicable TMDL implementation plans.

11. The permittees shall continue to implement the established model maintenance procedure for drainage facilities (catch basins, storm drains inlets, open channels, etc.). Each permittee shall clean and maintain at least 80% of its drainage facilities on an annual basis, with 100% of the facilities included in a two-year period, using the model maintenance procedures developed by the permittees. Each permittee shall keep a record of its inspections, maintenance and cleaning activities, and overall quantity of waste removed. This record shall be included in the annual report.
12. The permittees shall determine whether a more aggressive maintenance frequency is necessary for the cleaning of drainage facilities, including catch basins, based on the data generated by the historic and ongoing inspections of these facilities. This program shall be based on a list of drainage facilities and prioritized on such factors as: proximity to receiving waters, receiving water beneficial uses and impairments of beneficial uses, historical pollutant types and loads from past inspections/cleanings and the presence of downstream regional facilities that would remove the types of pollutants found in the drainage facility. Using this list, the permittees shall revise clean out schedules and frequency and provide justification for any proposed clean out frequency that is less than once a year. This information shall be included in the annual report.
13. Within six months of adoption of this order, the permittees shall evaluate the applicability of the Model Municipal Activities Program to municipal maintenance contracts, contracts for field maintenance operations, and leases. The findings from the evaluation shall be included in the next annual report.
14. Each permittee shall implement control measures necessary to minimize infiltration of seepage from sanitary sewers to the storm drain systems through routine preventive maintenance of the storm drain system. The permittees who are also owners and/or operators of sewage collection systems shall also implement a routine maintenance program for the sewage collection systems in accordance with the State Board's Water Quality Order No. 2006-0003. Each permittee shall cooperate and coordinate with the sewage collection/treatment agencies (Orange County Sanitation District and/or Irvine Ranch Water District) to swiftly respond to and contain any sewage spills.

XV. MUNICIPAL CONSTRUCTION PROJECTS/ACTIVITIES

1. This order authorizes the discharge of storm water runoff from construction projects that may result in land disturbance of one (1) acre or more (or less than one acre, if it is part of a larger common plan of development or sale which is one acre or more) that are under ownership and/or direct responsibility of any of the permittees. All permittee construction activities shall be in accordance with DAMP Sections 7 and 8.
2. All construction activities shall be in compliance with the latest version of State's General Permit for Storm Water Discharges Associated with Construction Activities except that an NOI need not be filed with the State Board.
3. Prior to commencement of construction activities, the permittees shall notify the Executive Officer of the Regional Board concerning the proposed construction project. Upon completion of the construction project, the Executive Officer shall be notified of the completion of the project.

4. The permittees shall develop and implement a storm water pollution prevention plan (SWPPP) and a monitoring program that is specific for the construction project greater than one acre, prior to the commencement of any of the construction activities, except for routine maintenance activities. The SWPPP shall be kept at the construction site and released to the public and/or Regional Board staff upon request.
5. The SWPPP (and any other plans and programs required under the General Permit) and the monitoring program for the construction projects shall be consistent with the requirements of the latest version of the State's General Construction Permit.
6. The permittees shall give advance notice to the Executive Officer of the Regional Board concerning any planned changes in the construction activity, which may result in non-compliance with the latest version of the State's General Construction Permit.

XVI. TRAINING PROGRAM FOR STORM WATER MANAGERS, PLANNERS, INSPECTORS AND MUNICIPAL CONTRACTORS

1. Within 12 months from the date of adoption of this order, the principal permittee, in coordination with the co-permittees, shall develop a training program including a training schedule, curriculum content, and defined expertise and competencies for storm water managers, inspectors, maintenance crew, those involved in the review and approval of WQMPs, public works employees, community planners and for those preparing and/or reviewing CEQA documentation and for municipal contractors.
2. The curriculum content should include: federal, state and local water quality laws and regulations as they apply to construction and grading activities, industrial and commercial activities; the potential effects of construction, industrial and commercial activities and urbanization on water quality; implementation and maintenance of erosion control and pollution prevention measures and sediment control BMPs; the proper use and maintenance of erosion and sediment controls; the enforcement protocols and methods established in the Drainage Area Management Plan, Local Implementation Plan, the Construction Runoff Guidance Manual, Enforcement Consistency Guide and Illicit Discharge/Illegal Connection Training Program. Each permittee may develop its own training program curriculum consistent with the general principles discussed in this and the next paragraph. The training program should be coordinated with the Orange County Vector Control District to insure that vector control issues related to post-construction BMPs are incorporated into the training curriculum.
3. The training modules for each category of trainees (managers, inspectors, planners, contractors, public works crew, etc.) should define the required competencies, outline the curriculum, a testing or other procedure at the end of the training program to determine that the trainees have acquired the requisite knowledge in the storm water program to carry out their duties and proof of completion of training, such as Certificate of Completion, attendance sheets or other proof that training has been completed. .
4. At least every two years, the principal permittee shall provide and document training to applicable public agency staff on Fixed Facility Model Maintenance Procedure, Field Program Model Training and Drainage Facility Model Maintenance Training. The field program training should include Model Integrated Pest Management, Pesticide and Fertilizer Guidelines. Each permittee shall attend at least three of these training sessions during the term of this permit. The training sessions may be conducted in classrooms or using videos, DVDs, or other multimedia with appropriate documentation

and a final test to verify that the material has been properly reviewed and understood. The permittees have the option to develop and conduct their own training program as indicated in Paragraph 2, above.

5. The principal permittee shall conduct and document public employee training for model environmental review, and on how to conduct public/business education for preparation of environmental documents. The permittees have the option to develop and conduct their own training program as indicated in Paragraph 2, above.
6. The principal permittee shall provide BMP and training information to municipal contractors to assist the contractors in training their staff. In instances where applicable municipal operations are performed by contract staff, the permittees shall require evidence that contract staff have received a level of training equivalent to that listed above. The permittees have the option to develop and conduct their own training program as indicated in Paragraph 2, above.
7. The principal permittee shall notify designated Regional Board staff via e-mail at least 30 days prior to conducting any of these training sessions.
8. Each permittee shall have adequately trained all its staff involved with storm water related projects within 60 days from being assigned these duties and on an annual basis thereafter, prior to the rainy season.
9. Each permittee shall maintain a written record of all training provided to its storm water and related program staff.

XVII. NOTIFICATION REQUIREMENTS

1. Within 24 hours of discovery, each permittee shall provide oral or e-mail notification to Regional Board staff of non-compliant sites within its jurisdiction that are determined to pose imminent threat to human health or the environment (e.g., sewage spills that could impact water contact recreation, an oil spill that could impact wildlife, a hazardous substance spill where residents are evacuated, etc.). Following oral or email notification, a written report must be submitted to the Regional Board office within 5 business days, detailing the nature of the non-compliance, any corrective action taken by the site owner, other relevant information (e.g., past history of non-compliance, environmental damage resulting from the non-compliance, site owner responsiveness) and the type of enforcement that will be carried out by the permittee. Further, incidences of non-compliance shall be recorded along with the information noted in the written report and the final outcome/enforcement for the incident in the databases for construction, industrial and commercial inspections[61].
2. At a minimum, all sewage spills above 1,000 gallons and all reportable quantities of hazardous waste spills as per 40CFR 117 and 302 shall be reported within 24 hours. All spill incidents shall be also included in the annual report. The permittees may propose a reporting program, including reportable incidents and quantities, jointly with other agencies, such as the County Health Care Agency, for approval by the Executive Officer.

[61] The reporting schedule may be revised with the approval of the Executive Officer.

XVIII. WATERSHED ACTION PLANS AND TMDL IMPLEMENTATION

A. IMPAIRED WATERBODIES WITH NO TMDLS

1. The principal permittee, in collaboration with the co-permittees, shall develop Watershed Action Plans for areas where such a Plan has not been developed. Existing Watershed Action Plans and those under development shall be updated as new TMDLs are approved by the Regional Board.
2. Each Watershed Action Plan shall identify impaired waters [CWA § 303(d) listed], pollutants causing impairment, monitoring programs for these pollutants, control measures, including any BMPs that the permittees are currently implementing, and any BMPs that the permittees are proposing to implement. All construction sites that are adjacent to (within 200 feet) or discharging directly to a waterbody listed for sediments or turbidity shall be treated as high priority sites. In selecting control measures, the listed pollutants shall be treated as primary pollutants of concern and these pollutants shall be addressed through source control, site design, pollution prevention and structural treatment control BMPs.

B. WATERBODIES WITH TECHNICAL TMDLS (NO IMPLEMENTATION PLANS)

1. As required under a consent decree, in 2002, the EPA promulgated technical TMDLs for toxic pollutants in San Diego Creek and Newport Bay, including metals, organochlorine compounds, selenium and organophosphate pesticides. EPA and the Los Angeles Regional Water Quality Control Board established technical TMDLs for metals in Coyote Creek. Technical TMDLs do not include implementation plans or compliance schedules.
2. In collaboration with stakeholders, Regional Board staff are developing revised TMDLs that are expected to supplant the toxics TMDLs promulgated by EPA for the Newport watershed. The TMDLs will include implementation plans and compliance schedules. Implementation plans for the Coyote Creek TMDLs are also being developed.
3. In summary, work related to the following established TMDLs is ongoing:
   a) Metals (San Diego Creek and Newport Bay (including Rhine Channel))
   b) Metals (Mercury, Chromium) (Rhine Channel)
   c) Organochlorine compounds (San Diego Creek and Newport Bay; also see Paragraphs 5 and 6, below)
   d) Selenium (San Diego Creek and Newport Bay)
   e) Copper, lead and zinc (Coyote Creek, TMDL developed by the EPA and the Los Angeles Regional Water Quality Control Board for wet weather)
   f) Copper (Coyote Creek, TMDL developed by the EPA and the Los Angeles Regional Water Quality Control Board for dry weather)
4. The permittees in the Newport Watershed shall comply with the wasteload allocations specified in the established TMDLs and shown in Tables 1 A/B/C, 2 A/B/C/D and 3. These wasteload allocations shall remain in effect unless and

until alternative wasteload allocations are established in TMDLs approved by the Regional Board, State Board, Office of Administrative Law and EPA.

Tables 1 A/B/C/D – Urban Runoff Waste Load Allocations for Metals (TMDLs promulgated by U.S. EPA)[62]

A- San Diego Creek and Tributaries – Concentration based TMDL

	Base flows (<20 cfs) Hardness- 400 mg/L		Small flows (21-181 cfs) Hardness- 322 mg/L		Med. flows (182-815 cfs) Hardness- 236 mg/L		Large Flows (>815 cfs) Hardness- 197 mg/L
	Acute	Chronic	Acute	Chronic	Acute	Chronic	Acute
Cd (ug/L)	19.1	6.2	15.1	5.3	10.8	4.2	8.9
Cu (ug/L)	50	29.3	40	24.3	30.2	18.7	25.5
Pb (ug/L)	281	10.9	224	8.8	162	6.3	134
Zn (ug/L)	379	382	316	318	243	244	208

B- Newport Bay

Cd *	Cu	Pb	Zn
9,589 lbs/yr	3,403 lbs/yr	17,638 lbs/yr	174,057 lbs/yr

* (Applies to Upper Bay only, estimated as 40% of Newport Bay volume)

C- Rhine Channel

Mercury (Hg)	Chromium (Cr)
0.0171 kg/yr	5.66 kg/yr

D- Concentration-based Dissolved Metal TMDLs, WLAs and LAs for Newport Bay

	Dissolved saltwater TMDLs and allocations which apply to direct discharges to the bay, including storm drains/channels and metals loading associated with boats	
	Acute	Chronic
Cd* (ug/L)	42	9.3
Cu (ug/L)	4.8	3.1
Pb (ug/L)	210	8.1
Zn (ug/L)	90	81

* (Applies to Upper Bay only, estimated as 40% of Newport Bay volume).

[62] From Total Maximum Daily Loads For Toxic Pollutants San Diego Creek and Newport Bay, California, U.S. EPA – Region 9, established June 14, 2002.

Tables 2 A/B/C/D – Urban Runoff Waste Load Allocations for Organochlorine Compounds (TMDLs promulgated by U.S. EPA)[63]

A- San Diego Creek and Tributaries

Total DDT	Chlordane	Dieldrin	PCBs	Toxaphene
302.8 g/yr	220.3 g/yr	183.4 g/yr	177.7 g/yr	6.2 g/yr

B- Upper Newport Bay

Total DDT	Chlordane	PCBs
207.4 g/yr	120.5 g/yr	609.7 g/yr

C – Lower Newport Bay

Total DDT	Chlordane	Dieldrin	PCBs
76.3 g/yr	12.6 g/yr	4.45 g/yr	303.3 g/yr

D – Rhine Channel

	Total DDT	Chlordane	Dieldrin	PCBs
WLA	0.7 g/yr	0.1 g/yr	0.13 g/yr	4.1 g/yr

Table 3 – Urban Runoff Waste Load Allocation for Selenium – San Diego Creek and Tributaries (TMDL promulgated by U.S. EPA)[64]

Base flows (<20 cfs)	Small flows (21-181 cfs)	Med. flows (182–814 cfs)	Large Flows (>814 cfs)
0.4 lbs/yr	1.0 lbs/yr	1.0 lbs/yr	5.3 lbs/yr

5. The Regional Board adopted TMDLs, including an implementation plan, for organochlorine compounds in September 2007. These TMDLs must be submitted for approval by the State Board, Office of Administrative Law and EPA. These TMDLs have not yet been submitted to the State Board for its approval. However, stakeholders in the watershed are already taking steps to implement the TMDLs through a Toxicity Reduction and Investigation Program (TRIP) that will address the organochlorine compounds and other toxic pollutants, including metals, in the Newport Bay watershed. These TMDLs will become effective upon approval by the State Board and Office of Administrative

[63] From Total Maximum Daily Loads For Toxic Pollutants San Diego Creek and Newport Bay, California, U.S. EPA – Region 9, established June 14, 2002.

[64] From Total Maximum Daily Loads For Toxic Pollutants San Diego Creek and Newport Bay, California, U.S. EPA – Region 9, established June 14, 2002.

Law but will not supplant the EPA organochlorine compounds TMDLs until they are approved by EPA. Accordingly, upon approval of the Regional Board-adopted organochlorine compounds TMDLs by the State Board and the Office of Administrative Law, the permittees shall comply with both the EPA and Regional Board wasteload allocations specified in Tables 2 A/B/C/D and Table 4, respectively. In accordance with the Regional Board TMDLs, compliance with the allocations specified in Table 4 shall be achieved as soon as possible but no later than December 31, 2015. Upon approval of the Regional Board-approved organochlorine compounds TMDLs by EPA, the applicable wasteload allocations shall be those specified in Table 4.

Table 4 – Urban Runoff Waste Load Allocations for Organochlorine Compounds (TMDLs approved by Santa Ana Regional Water Quality Control Board)[65]

	Total DDT	Chlordane	Total PCBs	Toxaphene
San Diego Creek	128.3 g/yr			1.9 g/yr
Upper Newport Bay	51.8 g/yr	30.1 g/yr	29.8 g/yr	
Lower Newport Bay	19.1 g/yr	11.0 g/yr	78.1 g/yr	

6. The organochlorine compounds are carried by fine sediment into the water column. Since the use of organochlorine pesticides has been banned, the levels of these compounds have been steadily decreasing in the watershed. The implementation plan requires monitoring to verify the decreasing trend and strict controls on sediment discharges. The stakeholders in the San Diego Creek/Newport Bay watershed have an established Regional Monitoring Program (RMP), and in early 2008, initiated the Toxicity Reduction and Investigation Program (TRIP) consistent with the Regional Board-approved implementation plan for the organochlorine compounds TMDLs. Recognizing the difficulties inherent in measuring the allocations presented in Table 4, the permittees shall evaluate the monitoring results with the targets shown in Tables 5A/B and determine the need for any additional control measures to achieve the targets. Monitoring shall be conducted at representative locations within San Diego Creek and Newport Bay and include water column, sediment and fish tissue monitoring. The permittees may use current monitoring locations.

[65] From Resolution No. R8-2007-0024, Table NB-OCs-10.

Tables 5 A /B - Water Column Targets for Protection of Aquatic Life, Wildlife & Human Health[66]

A - San Diego Creek and Tributaries

	Total DDT	Toxaphene
Acute Criterion	1.1 µg/l	0.73 µg/l
Chronic Criterion	0.001 µg/l	0.0002 µg/l
Human Health Criterion	0.00059 µg/l	0.00075 µg/l

B - Upper and Lower Newport Bay

	Total DDT	Chlordane	Total PCBs
Acute Criterion	0.13 µg/l	0.09 µg/l	
Chronic Criterion	0.001 µg/l	0.0004 µg/l	0.03 µg/l
Human Health Criterion	0.00059 µg/l	0.00059 µg/l	0.00017 µg/l

7. Regional Board staff, in collaboration with the stakeholders, is developing TMDLs for metals and selenium that will include implementation plans and monitoring programs and that are intended to replace the EPA TMDLs. The permittees within the Newport Bay watershed shall continue to participate in the development and implementation of these TMDLs. This Order will be reopened to incorporate revised allocations based upon TMDLs, including implementation plans, for metals and selenium approved by the Regional Board, State Board and Office of Administrative Law. As for the organochlorine compounds, the EPA promulgated allocations for these constituents will also remain in effect unless and until EPA approves the Regional Board's TMDLs for these constituents.

8. Selenium is a naturally occurring element in the soil but its presence in surface waters in the Newport Bay watershed is largely the result of changes in the hydrologic regime as the result of extensive drainage modifications. Selenium-laden shallow and rising groundwater enters the storm water conveyance systems and flows into San Diego Creek and its tributaries. Groundwater inputs are the major source of selenium in San Diego Creek and Newport Bay. Currently, there are no economically and technically feasible treatment techniques to remove selenium from the water column.

[66] From Resolution No. R8-2007-0024, Table NB-OCs-4.

The stakeholders have initiated pilot studies to determine the most efficient methods for treatment and removal of selenium. Through the Nitrogen and Selenium Management Program, the watershed stakeholders are developing comprehensive selenium (and nitrogen) management plans, which are expected to form the basis, at least in part, for the selenium implementation plan (and a revised nutrient TMDL implementation plan). A collaborative watershed approach to implement the nitrogen and selenium TMDLs for San Diego Creek and Newport Bay is expected. A proposed Cooperative Watershed Program that will fulfill applicable requirements of the selenium TMDL implementation plan must be submitted by the stakeholders covered by this order within 24 months of adoption of this order, or one month after approval of the selenium TMDLs by OAL, whichever is later. The Program must be implemented upon Regional Board approval. As long as the stakeholders are participating in and implementing the approved Cooperative Watershed Program, they will not be in violation of this order with respect to the nitrogen and selenium TMDLs for San Diego Creek and Newport Bay. In the event that any of the stakeholders does not participate, or if the collaborative approach is not approved or fails to achieve the TMDLs, the Regional Board will exercise its option to issue individual waste discharge requirements or waivers of waste discharge requirements.

9. The permittees with discharges tributary to Coyote Creek or the San Gabriel River shall develop and implement a constituent-specific source control plan for copper, lead and zinc until a TMDL implementation plan is developed. The source control plan shall include a monitoring program and shall be completed within 12 months from the date of adoption of this order. The source control plan shall be designed to ensure compliance with the following wasteload allocations:

Table 6 – Municipal Storm Water Wasteload Allocations - Coyote Creek

	Copper	Lead	Zinc
Dry Weather	0.941 kg/day		
Wet Weather	9.41 kg/day	36.9 kg/day	55.0 kg/day

10. Within 12 months of adoption of this order, the principal permittee, in collaboration with the co-permittees with discharges to the San Gabriel River/Coyote Creek and/or their tributaries, shall develop a monitoring program to monitor dry weather (for copper) and wet weather (for copper,

lead and zinc) flows in Coyote Creek. The monitoring results shall be evaluated against the following numeric targets:

Table 7 – Numeric Targets - Coyote Creek
(total recoverable metals)

	Copper	Lead	Zinc
Dry Weather[67]	3.7 µg/l		
Wet Weather	27 µg/l	106 µg/l	158 µg/l

C. WATERBODIES WITH TMDL IMPLEMENTATION PLANS AND COMPLIANCE SCHEDULES BEYOND THE PERMIT TERM

1. The Regional Board adopted a TMDL implementation plan for fecal coliform bacteria in Newport Bay that included a compliance date for water contact recreation standards no later than December 30, 2013 (within the permit term), and with shellfish standards no later than December 30, 2019. The allocations are shown in the tables below.

Table 8A – Fecal Coliform TMDL and Allocations for Newport Bay
To be achieved no later than December 30, 2013

Urban Runoff Waste Load Allocation for Fecal Coliform	As soon as possible, but no later than December 30, 2013	5-Sample/30-days Geometric Mean less than 200 organisms/100 mL, and not more than 10% of the samples exceed 400 organisms/100 mL for any 30- day period.
Total Maximum Daily Load for Fecal Coliform		5-Sample/30-days Geometric Mean less than 200 organisms/100 mL, and not more than 10% of the samples exceed 400 organisms/100 mL for any 30-day period.
Load Allocations for Fecal Coliform in Agricultural Runoff, including stormwater, Discharges		5-Sample/30-days Geometric Mean less than 200 organisms/ 100 mL, and not more than 10% of the samples exceed 400 organisms/100 mL for any 30-day period.
Load Allocations for Fecal Coliform from Natural Sources in all Discharges	In effect	5-Sample/30-days Geometric Mean less than 200 organisms/100 mL, and not more than 10% of the samples exceed 400 organisms/100 mL for any 30-day period.
Allocations for Vessel Waste		0 MPN/100 mL - No discharge.

[67] Based on saltwater CTR criterion in San Gabriel River estuary.

Table 8B – Fecal Coliform TMDL and Allocations for Newport Bay

Before December 30, 2019

Urban Runoff Waste Load Allocation for Fecal Coliform	As soon as possible, but no later than December 30, 2019	Monthly Median less than 14 MPN/100 mL, and not more than 10% of the samples exceed 43 MPN/100 mL.
Total Maximum Daily Load for Fecal Coliform		Monthly Median less than 14 MPN/100 mL, and not more than 10% of the samples exceed 43 MPN/100 mL.
Load Allocations for Fecal Coliform in Agricultural Runoff, including stormwater, Discharges		Monthly Median less than 14 MPN/100 mL, and not more than 10% of the samples exceed 43 MPN/100 mL.
Load Allocations for Fecal Coliform from Natural Sources in all Discharges		Monthly Median less than 14 MPN/100 mL, and not more than 10% of the samples exceed 43 MPN/100 mL.
Allocations for Vessel Waste	In effect	0 MPN/100 mL - No discharge.

The permittees shall comply with the wasteload allocations for urban runoff in Tables 8A and 8B in accordance with the deadlines in Tables 8A and 8B. Compliance determination for fecal coliform shall be based on monitoring conducted at representative sampling locations within San Diego Creek and Newport Bay. (The permittees may use the current sampling locations for compliance determination.)

2. The fecal coliform TMDL implementation plan includes a number of studies that are expected to inform possible revision of the TMDL, including the wasteload allocations for urban runoff and the implementation plan. The permittees shall revise the Watershed Action Plans to include implementation measures and schedules for further studies related to the TMDL for fecal coliform in Newport Bay, as set forth in the January 2000, March 2000 and April 2000 Newport Bay Fecal Coliform TMDL Technical Reports submitted by the permittees. The permittees within this watershed shall complete the ongoing source identification and characterization plan for urban runoff by December 31, 2009 and continue their participation in the studies and monitoring programs as specified in the implementation plan. Recommendations for an updated TMDL report and revisions to the fecal coliform TMDL shall be provided within twelve months of completion of the Source Identification and Characterization Investigation and Report submittal, as specified in the implementation plan.

3. The fecal coliform TMDL includes waste load allocations for storm water in urban runoff and load allocations in agricultural runoff. The University of California Cooperative Extension and Orange County Coastkeeper are working with the agricultural operators in the area to reduce runoff from their operations.

D. WATERBODIES WITH TMDL IMPLEMENTATION PLANS AND COMPLIANCE SCHEDULES WITHIN THE PERMIT TERM

1. The Regional Board/EPA developed TMDLs for diazinon and chlorpyrifos in San Diego Creek and for chlorpyrifos in Newport Bay. The following allocations are included in the TMDLs (Tables 9A and 9B are extracted from the Implementation Plan[68]). The permittees in the Newport Bay Watershed shall comply with the allocations in Tables 9 A and B.

Table 9A

Diazinon and Chlorpyrifos Allocations for San Diego Creek*

Category	Diazinon (ng/l)		Chlorpyrifos (ng/l)	
	Acute	Chronic	Acute	Chronic
Wasteload Allocation	72	45	18	12.6

Chronic means 4-consecutive day average

* Pursuant to the TMDLs, compliance with these allocations was achieved no later than December 1, 2007

Table 9B

Chlorpyrifos Allocations for Upper Newport Bay*

Category	Acute (ng/l)	Chronic (ng/)
Wasteload allocation	18	8.1

Chronic means 4-consecutive day average

* Pursuant to the TMDLs, compliance with these allocations was achieved no later than December 1, 2007

The Regional Board adopted an implementation plan for these TMDLs. In accordance with the implementation plan, the Regional Monitoring Program was modified to include analysis for organophosphate pesticides and toxicity. The Regional Board also performed simulation studies to predict contaminant concentrations in the Bay. Based on the results of these studies, the Regional Board will reevaluate the TMDLs every three years. The permittees shall continue to participate in any additional monitoring that is needed to confirm that the permittees are in compliance with the allocations.

Compliance determination for diazinon and chlorpyrifos for San Diego Creek shall be based on monitoring conducted at representative monitoring locations within San Diego Creek (the permittees may use current monitoring locations for this purpose).

Compliance determination for chlorpyrifos for Upper Newport Bay shall be based on monitoring conducted at representative monitoring locations within Upper Newport Bay (the permittees may use current monitoring locations for this purpose).

[68] Attachment to Resolution No. R8-2003-0039.

2. The waste load allocations established in the nutrient TMDLs adopted by the Regional Board in 1998 for Newport Bay included 5, 10 and 15 year allocations. The overall allocations for 2012 have been met.

Table 10 - Seasonal Load Allocations of Total Nitrogen for the Newport Bay Watershed (Urban Runoff)[69]

Nutrient TMDL	1990-1997 Loading	2002 Summer Allocation (Apr-Sept)[70]	2007 Summer Allocation (Apr-Sept)[71]	2012 Winter Allocation (Oct-Mar)[72]
Newport Bay Watershed	lbs/year TN[73,74]	lbs/season TN	lbs/season TN	lbs/season TN
Urban runoff	277,131[75]	20,785	16,628	55,442
		5 year target	10 year target	15 year target

Table 11 - Annual Total Nitrogen Load Allocations for San Diego Creek, Reach 2 During Non-Storm Conditions.[76]

	2012 Allocation lbs/day TN[77]
TMDL	14 lbs/day (TN)
Waste Load Allocation (Urban runoff)	5.5 lbs/day (TN)

3. The permittees shall verify, through monitoring or other mechanisms, that they have met the following load allocations for phosphorous for urban runoff (recent

[69] From Attachment to Resolution No. 98-9 as amended by Resolution No. 98-100, Table 5-9b.Compliance dates are as soon as possible but no later than December 31 of the years specified (Table 5-9a of Resolution No. 98-9, as amended).

[70] Compliance to be achieved no later than this date. The Regional Board may require earlier compliance with these targets when it is feasible and reasonable.

[71] See previous footnote.

[72] Total nitrogen winter loading limit applies between October 1 and March 31 when the mean daily flow rate at San Diego Creek at Campus Drive is below 50 cubic feet per second (cfs), and when the mean daily flow rate in San Diego Creek at Campus Drive is above 50 cubic feet per second (cfs), but not as the result of precipitation. Compliance to be achieved no later than this date. The Regional Board may require earlier compliance with these targets when it is feasible and reasonable. Assumes 67 non-storm days.

[73] TIN = (NO3+NH3).

[74] TN = (TIN + Organic N).

[75] Estimated annual average (summer and winter loading).

[76] From Attachment to Resolution No. 98-9 as amended by Resolution No. 98-100, Table 5-9d. Total nitrogen loading limit applies when the mean daily flow rate at San Diego Creek at Culver Drive is below 25 cubic feet per second (cfs), and when the mean daily flow rate in San Diego Creek at Culver Drive is above 25 cubic feet per second (cfs), but not as the result of precipitation.

[77] Compliance to be achieved no later than December 31, 2012. The Regional Board may require earlier compliance with these targets when it is feasible and reasonable.

monitoring data indicate that these target load allocations have been already met).

Table 12 - Annual Total Phosphorous Load Allocations For The Newport Bay Watershed[78]

	2002 Allocation lbs/year TP[79]	2007 Allocation lbs/year TP[80]
TMDL	86,912	62,080
Urban areas	4,102	2,960

The permittees shall comply with the waste load allocations for urban runoff in Tables 10, 11 and 12 in accordance with the schedules in Tables 10, 11 and 12. Compliance determination for nutrients in San Diego Creek and Newport Bay shall be based on monitoring conducted at representative monitoring locations within San Diego Creek and Newport Bay.

4. The permittees shall meet the following target load allocations for sediment in urban runoff by implementing the BMPs contained in Sections 7 and 8 of the DAMP and the "March 1999 Technical Report on the Implementation of the TMDL for Sediment in the Newport Bay Watershed, the October 1999 Preliminary Sediment Load Allocation Analysis for San Diego Creek and Newport Bay, and the February 2000 Sediment Yield and Transport Investigation for San Diego Creek and Newport Bay".

   a) The load allocations for sediment discharges to Newport Bay from urban areas shall not exceed 2,500 tons per year, implemented as a 10-year running annual average.

   b) The load allocations for sediment discharges to San Diego Creek and its tributaries from urban areas shall not exceed 2,500 tons per year, implemented as a 10-year running annual average.

   Compliance determination for sediment in San Diego Creek and Newport Bay shall be based on monitoring conducted at San Diego Creek at Campus, starting from year 2000 and based on a 10-year running average. The data from this monitoring is to be submitted annually on February 27.

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[78] From Attachment to Resolution No. 98-9 as amended by Resolution No. 98-100, Table 5-9c. Compliance dates are as soon as possible but no later than December 31 of the years specified (Table 5-9a of Resolution No. 98-9, as amended).

[79] Compliance to be achieved no later than this date. The Regional Board may require earlier compliance with these targets when it is feasible and reasonable.

[80] See previous footnote.

5. This order may be reopened to include additional requirements based on new or revised TMDLs.

E. COMPLIANCE DETERMINATION WITH TMDLs AND BMP IMPLEMENTATION

1. Except for sediment TMDLs in San Diego Creek and Newport Bay, compliance determinations shall be based on monitoring within the receiving waters. For sediment TMDLs, compliance determination shall be based on monitoring in the Creek.
2. Based on the TMDLs, effluent limits have been specified to ensure consistency with the wasteload allocations. If the monitoring results indicate an exceedance of the wasteload allocations, the permittees shall reevaluate the current control measures and propose additional BMPs/control measures. This reevaluation and proposal for revisions to the current BMPs/control measures (revised plan) shall be submitted to the Executive Officer within 12 months of determining that an exceedance has occurred. Upon approval, the permittees shall immediately start implementation of the revised plan.

XIX. PROGRAM MANAGEMENT/DAMP REVIEW

1. By July 1 of each year, the permittees shall evaluate the DAMP to determine whether any revisions are necessary in order to reduce pollutants in MS4 discharges to the maximum extent practicable. In addition, the first annual review after adoption of this order shall include the following:
   a) Review of the formal training needs of municipal employees
   b) Review of coordinating meeting/training for the designated NPDES inspectors.
2. The annual report shall include the findings of this review and a schedule for any needed revisions or a copy of the amended DAMP with the proposed changes.
3. Upon the effective date of this Order, the permittees shall start implementing the 2007 DAMP. If modifications to the 2007 DAMP are determined to be necessary, the permittees shall prepare and submit DAMP modifications to the Regional Board Executive Officer, for consideration by the Regional Board at a public hearing. Such modifications may include regional and watershed-specific requirements and/or waste load allocations developed and approved pursuant to the TMDL process.
4. The Management Committee shall meet at least six times a year to discuss issues related to permit implementation and regional and statewide issues. Each permittee's designated representative or a designated alternate should attend at least 75% of these meetings.

XX. FISCAL ANALYSIS

1. Each permittee shall secure the resources necessary to meet all requirements of this order.

2. The permittees shall prepare and submit a unified fiscal accountability analysis to the Executive Officer of the Regional Board. The fiscal analysis shall be submitted with the annual report shall, at a minimum, include the following:
   a) Each permittee's expenditures for the previous fiscal year,
   b) Each permittee's budget for the current fiscal year,
   c) A description of the source of funds, and
   d) Each permittee's estimated budget for the next fiscal year.

XXI. PROVISIONS

1. All reports submitted by the permittees as per the requirements in this order for the approval of the Executive Officer shall be publicly noticed and made available on the Regional Board's website, or through other means, for public review and comments. The Executive Officer shall consider all comments received prior to approval of the reports. Any unresolved significant issues shall be scheduled for a public hearing at a Regional Board meeting prior to approval by the Executive Officer.
2. Permittees shall demonstrate compliance with all the requirements in this order and specifically with Section III.2 Discharge Limitations and Section IV. Receiving Water Limitations, through timely implementation of their DAMP and any modifications, revisions, or amendments developed pursuant to this order approved by the Executive Officer or determined by the permittee to be necessary to meet the requirements of this order.
3. The permittees shall, at a minimum, implement all elements of the DAMP. Where the dates in the DAMP are different than those of this order, the dates in this order shall prevail. Any proposed revisions to the DAMP shall be submitted with the annual report to the Executive Officer of the Regional Board for review and approval. All approved revisions to the DAMP shall be implemented as per the time schedules approved by the Executive Officer. In addition to those specific controls and actions required by (1) the terms of this order and (2) the DAMP, each permittee shall implement additional controls, if any are necessary, to reduce the discharge of pollutants in storm water to the maximum extent practicable, as required by this order.
4. The permittees shall comply with Monitoring and Reporting Program NO. R8-2008-0030, and any revisions thereto, which is hereby made a part of this order. The Executive Officer is authorized to revise the Monitoring and Reporting Program to allow the permittees to participate in regional, statewide, national or other monitoring programs in lieu of or in addition to Monitoring and Reporting Program No. R8-2008-0030.
5. Within one year of adoption of this order, the permittees, in coordination with the Orange County Fire Chiefs Association, shall develop a list of appropriate BMPs to be implemented to reduce pollutants from training activities, fire hydrant/sprinkler testing or flushing, non-emergency fire fighting and any BMPs feasible for emergency fire fighting flows.

6. Upon approval by the Executive Officer of the Regional Board, all plans, reports and subsequent amendments required by this order shall be implemented and shall become an enforceable part of this order. Prior to approval by the Executive Officer, these plans, reports and amendments shall not be considered as an enforceable part of this order.
7. The permittees shall report to the Executive Officer of the Regional Board:
   a) Any enforcement actions and discharges of storm or non-storm water, known to the permittees, which may have an impact on human health or the environment,
   b) Any suspected or reported activities on federal, state, or other entity's land or facilities, where the permittees do not have any jurisdiction, and where the suspected or reported activities may be contributing pollutants to waters of the US.

   (Also see reporting requirements in Monitoring and Reporting Program No. R8-2008-0030)
8. The permit application package and special NPDES program requirements contained in 40 CFR 122.21 (a), (b), (d)(2), (f), (p); 122.41 (a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k), (l); and 122.42 (c) are incorporated into this order by reference.

XXII. PERMIT MODIFICATION

1. In accordance with 40 CFR 122.41(f), this order may be modified, revoked or reissued prior to its expiration date for the following reasons:
   a) To address significant changes in conditions identified in the technical reports required by the Regional Board which were unknown at the time of the issuance of this order;
   b) To incorporate applicable requirements of statewide water quality control plans adopted by the State Water Resources Control Board or any amendments to the Basin Plan approved by the Regional Board, the State Board and, if necessary, by the Office of Administrative Law;
   c) To comply with any applicable requirements, guidelines, or regulations issued or approved under the Clean Water Act, if the requirements, guidelines, or regulations contain different conditions or additional requirements than those included in this order; or,
   d) To incorporate any requirements imposed upon the permittees through the TMDL process.
2. The filing of a request by the permittees for modification, revocation and re-issuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any conditions of this order.

XXIII. PERMIT EXPIRATION AND RENEWAL

1. This order expires on April 1, 2014 and the permittees must file a Report of Waste Discharge (permit application) no later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements (40 CFR

122.41(b)). The Report of Waste Discharge shall, at a minimum, include the following:

a) Any revisions to the Drainage Area Management Plan including, but not limited to, all the activities the permittees propose to undertake during the next permit term, goals and objectives of such activities, an evaluation of the need for additional source control and/or structural BMPs, any proposed pilot studies, etc.;

b) Changes in land use and/or population including land use map updates;

c) Any significant changes to the storm drain systems, outfalls, detention or retention basins or dams and other controls including map updates of the storm drain systems; and,

d) Any new or revised program elements and compliance schedule(s) necessary to comply with Section IV of this order.

2. All permit applications (Report of Waste Discharge), annual reports and other information submitted under this order shall be signed by either a principal executive officer or a ranking elected official (40 CFR 122.22(a)(3)) or a duly authorized representative as per 40 CFR 122.22(b).

3. This order shall serve as a National Pollutant Discharge Elimination System (NPDES) Permit pursuant to Section 402(p) of the Clean Water Act, or amendments thereto, and shall become effective ten days after the date of its adoption, provided the Regional Administrator of the EPA has no objections. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

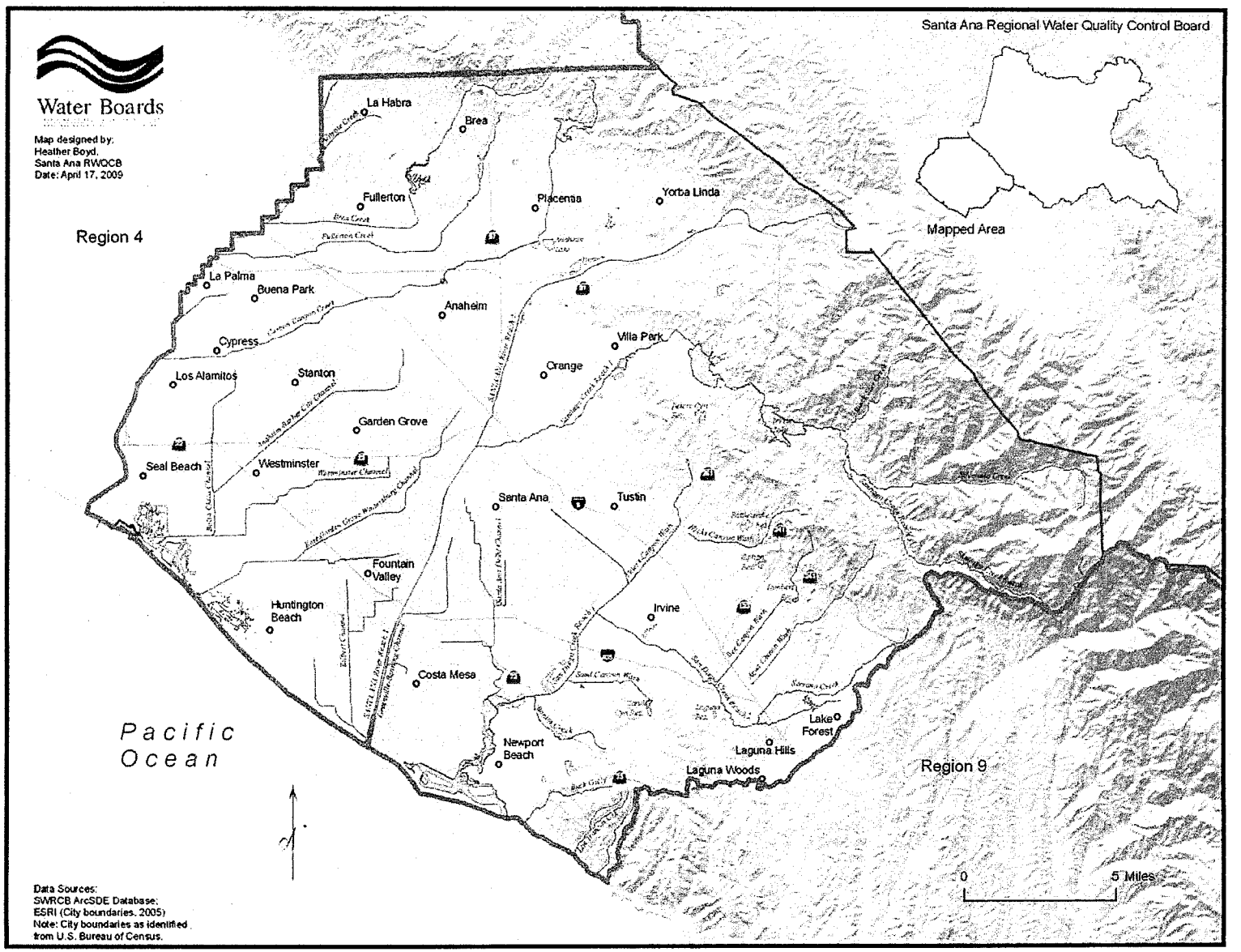
4. Order No. R8-2002-0010 is hereby rescinded.

I, Gerard Thibeault, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on May 22, 2009.

Gerard J. Thibeault
Executive Officer

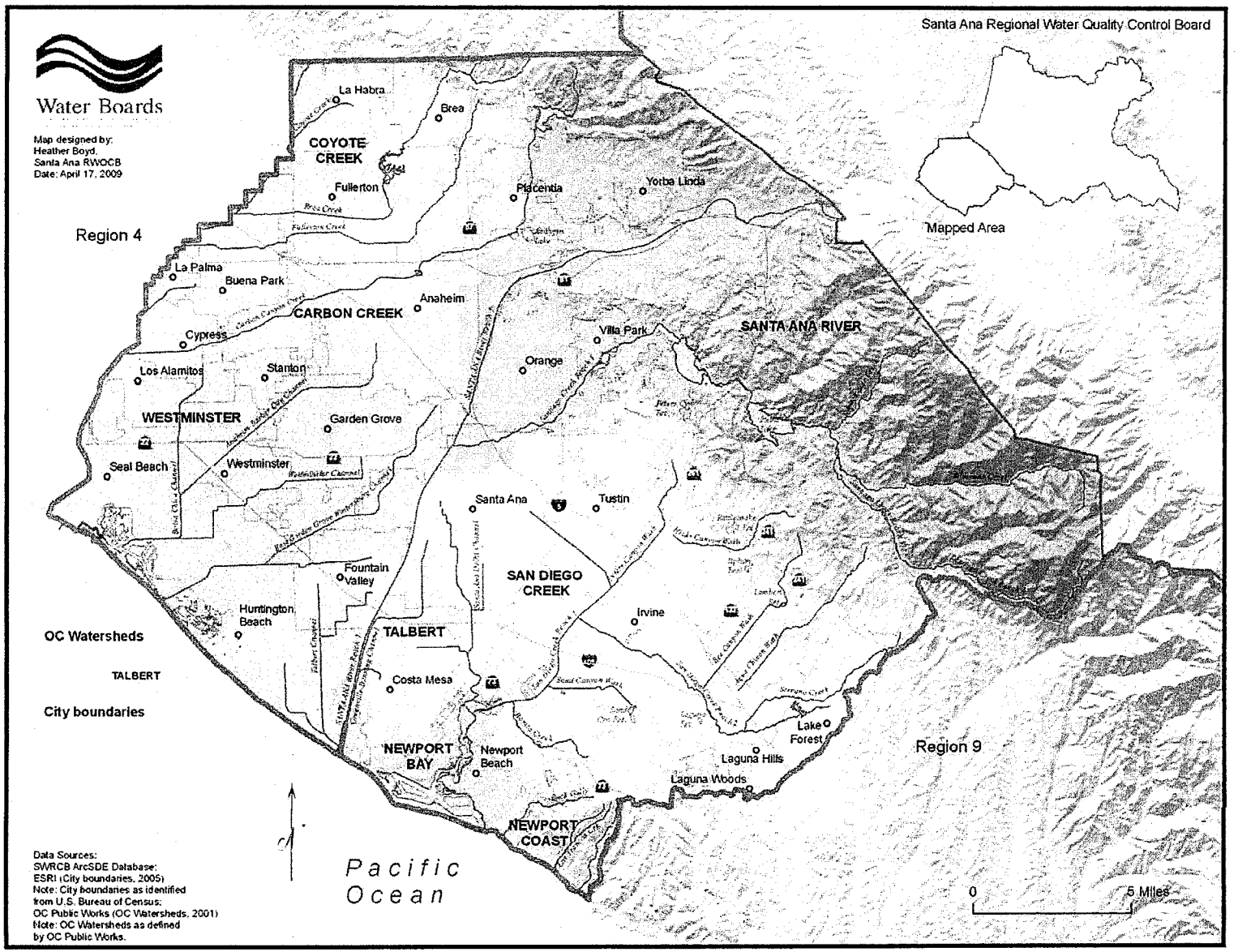
Order No. R8-2009-0030 (NPDES No. CAS618030) – cont'd
The County of Orange, OCFCD, and Incorporated Cities
Area wide Urban Storm Water Runoff

Attachment "A"



Order No. R8-2009-0030 (NPDES No. CAS618030) – cont'd
The County of Orange, OCFCD, and Incorporated Cities
Area wide Urban Storm Water Runoff

Attachment "B"



Order No. R8-2009-0030
Attachment "C"
LIST OF OTHER ENTITIES WITH THE POTENTIAL TO DISCHARGE POLLUTANTS TO THE ORANGE COUNTY STORM WATER SYSTEM

California Department of Transportation (Caltrans), District 12
Southern Pacific Railroad
Atchison, Topeka & Santa Fe Railway Company
Seal Beach Naval Weapons Station
Seal Beach Naval Reserve Center, Los Alamitos
National Forest Service

Universities and Colleges

University of California, Irvine
California State University, Fullerton
Chapman College
Coastline College
Cypress College
Fullerton College
Irvine Valley College
Golden West College
Orange Coast College
Rancho Santiago College

School Districts

Anaheim Elementary School District
Anaheim Union High School District
Brea-Olinda Unified School District
Buena Park Joint Union High School District
Centralia Elementary School District
Cypress Elementary School District
Fountain Valley Union High School District
Fullerton Joint Union High School District
Garden Grove Unified School District
Huntington Beach Elementary School District
Huntington Beach Union High School District
Irvine Unified Union High School District
La Habra Joint Union High School District
Los Alamitos Unified School District
Lowell Joint Union High School District
Magnolia Elementary School District
Newport-Mesa Unified School District
Ocean View Union High School District
Orange Unified School District

Placentia Unified School District
Saddleback Unified School District
Santa Ana Unified School District
Savanna Union High School District
Tustin Unified School District
Westminster Union High School District
Yorba Linda Joint Union High School District

Hospitals

Anaheim General Hospital
Brea Community Hospital
Chapman General Hospital
Children's Hospital of Orange County, Orange
Coastal Communities Hospital, Santa Ana
Fairview Hospital
FHP Hospital, Fountain Valley
Fountain Valley Regional Hospital and Medical Center
Hoag Hospital, Newport Beach
Kaiser Foundation Hospital, Anaheim
Orange County Community Hospital, Buena Park
Pacifica Community Hospital, Huntington Beach
Placentia Linda Community Hospital
Santa Ana Hospital and Medical Center
St. Joseph's Hospital, Orange
U.C. Irvine Medical Center
Vencor Hospital of Orange County, Westminster
Whittier Hospital and Medical Center, Buena Park

Water/Wastewater Agencies

Santa Ana Watershed Project Authority
Irvine Ranch Water District
Los Aliso Water District
El Toro Water District
Mesa Consolidated Water District
San Bernardino County Flood Control District
Riverside County Flood Control & Water Conservation District
L.A. County Department of Public Works
County Sanitation Districts of Orange County
Costa Mesa Sanitary District
Orange County Water District
Metropolitan Water District

State of California
California Regional Water Quality Control Board
Santa Ana Region

Monitoring and Reporting Program No. R8-2009-0030
NPDES No. CAS618030

for
the County of Orange, Orange County Flood Control District,
and
Incorporated Cities of Orange County within the Santa Ana Region
Areawide Urban Storm Water Runoff

I. GENERAL

1. Revisions of the monitoring and reporting program are appropriate to ensure that the permittees are in compliance with requirements and provisions contained in this order. Revisions may be made under the direction of the Executive Officer at any time during the term, and may include a reduction or increase in the number of parameters to be monitored, the frequency of monitoring, or the number and size of samples collected.
2. The Executive Officer is authorized to allow the permittees to participate in statewide, national, or other monitoring programs in lieu of or in addition to this monitoring program.
3. All sample collection, handling, storage, and analysis shall be in accordance with 40 CFR Part 136 or other methods approved by the Executive Officer.
4. The permittees are authorized to complement their monitoring data with other monitoring sources, provided the monitoring conditions and sources are similar to those in the Santa Ana Watershed.
5. Any proposals for revisions to the 2003 Monitoring Plan shall be accompanied by a Quality Assurance Project Plan.

II. OBJECTIVES

The Orange County monitoring program was initiated in the mid 1970s with the goal of protecting key environmental resources. Successive iterations of the Orange County MS4 permit required the permittees to develop and implement comprehensive monitoring programs. During the first part of the third term permit, the permittees continued to implement the 1999 Water Quality Monitoring program. In August 2005, the Executive Officer approved the 2003 Monitoring Program that was developed in accordance with the requirements specified in the third term permit. The 2003 Monitoring Program was based on "The Model Monitoring Program for Municipal Separate Strom Sewer Systems in Southern California" developed by the Southern California Monitoring Coalition. The permittees also participate in the Regional Monitoring Program for San Diego Creek Nutrient TMDL, Southern California Bight Regional Monitoring Program, Southern California Stormwater Monitoring/Research Cooperative Program and other regional monitoring programs. The overall goal of these monitoring programs is to develop and

support an effective watershed and key environmental resources management program. The following are the major objectives:

1. To develop and support an effective municipal urban runoff pollutant source control program.
2. To define water quality status, trends, and pollutants of concern associated with urban runoff and their impact on the beneficial uses of the receiving waters.
3. To characterize pollutants associated with urban runoff and to assess the influence of urban land uses on water quality and the beneficial uses of receiving waters.
4. To identify significant water quality problems related to urban runoff.
5. To identify other sources of pollutants in urban runoff to the maximum extent possible (e.g., atmospheric deposition, contaminated sediments, other non-point sources, etc.)
6. To identify and prohibit illicit discharges.
7. To identify those waters, which without additional action to control pollution from urban storm water discharges, cannot reasonably be expected to attain or maintain applicable water quality standards required to sustain the beneficial uses in the Basin Plan (TMDL monitoring).
8. To determine unit loading rates from different urban land use categories.
9. To determine reference loads and concentrations from unimpacted areas of Orange County including sediment loads from open spaces at the foothills.
10. To determine runoff concentrations and loads as close as possible to the source (e.g., golf courses, restaurants, etc.)
11. To evaluate the effectiveness of existing urban runoff water quality management programs, including an estimate of pollutant reductions achieved by the structural and nonstructural BMPs implemented by the permittees. This should also include a determination of concentrations and unit loads that are achievable upon BMP implementation.
12. To evaluate costs and benefits of proposed municipal storm water quality control programs to the stakeholders, including the public.

The Regional Board recognizes that program modifications may be necessary to attain these objectives and authorizes the Executive Officer to evaluate and to determine adequate progress toward meeting each objective and the need for any modifications to the monitoring and reporting program.

III. MONITORING PROGRAM REQUIREMENTS

1. The permittees shall continue to implement the 2003 Monitoring Program. The permittees shall review the 2003 Monitoring Program on an annual basis and

determine the need for any modifications to the program. Each of the following elements of the program shall be evaluated:

a) Mass Emissions Monitoring. Currently the principal permittee monitors 11 mass emissions stations to estimate the total mass emissions from the MS4; assess trends in mass emissions over time; and to determine if the MS4 is contributing to exceedances of water quality objectives or beneficial uses, by comparing results to the California Toxics Rule (CTR), Basin Plan, Ocean Plan and/or other relevant standards. Samples are collected from the first storm event and two more storm events during the rainy season. A minimum of three dry-weather samples are also collected. Samples from the first rain event each year are analyzed for the entire suite of priority pollutants. All samples are analyzed for metals, pH, TSS, TOC, pesticides/herbicides, and constituents which are known to have contributed to impairment of local receiving waters. An additional 4 mass emissions stations are utilized only for nutrient analysis for TMDL requirements. Dry weather samples are also analyzed for oil and grease. Sediments associated with mass emissions are analyzed for constituents of concern.

b) Estuary/Wetlands Monitoring: Currently the permittees monitor 20 sites in Upper Newport estuary, Talbert Marsh, and Bolsa Chica wetlands areas to determine the effects of storm water and non-storm water runoff associated with increased urbanization on these systems. These monitoring locations include representative areas surrounding channel outfalls and areas away from channel outfalls to enable the determination of storm water and non-storm water effects on sediment chemistry, toxicity, benthic communities, nutrient status, and spatial extent of sediment fate within the estuarine environment.

c) Water Column Toxicity Monitoring: The current monitoring program analyses for toxicity to freshwater and marine species on mass emissions samples to determine the impacts of storm water and non-storm water runoff on toxicity of receiving waters.

d) Sediment: The permittees monitor sediment toxicity at seven stations in Newport Bay and seven stations along Huntington Harbour/Talbert Marsh areas.

e) Bacteriological/Pathogen Monitoring: The permittees currently monitor 9 representative areas along the Orange County coastline and six inland water bodies/channels, for total coliform, fecal coliform, and enterococcus in order to determine the impacts of storm water and non-storm water runoff on loss of beneficial uses to receiving waters. Currently weekly channel monitoring is conducted in San Diego Creek and Santa Ana-Delhi channels by both Orange County Environmental Health and the Orange County monitoring program. The Executive Officer is authorized to allow the permittees to integrate their monitoring efforts with other bacteriological/pathogen monitoring programs.

f) Bioassessment: The permittees currently monitor 12 stations in cooperation with the Southern California Coastal Water Research Project (SCCWRP) in efforts to evaluate the biological index approach for Southern California and to design a research project for developing an Index of Biological Integrity (IBI) for the region. The Executive Officer is authorized to allow the permittees to integrate this element of the monitoring program with the regional bioassessment monitoring initiative being coordinated by the Southern California Monitoring Coalition.

g) Reconnaissance: The permittees are currently conducting dry and wet weather reconnaissance surveys to identify and prohibit illicit discharges.

2. TMDL/303(d) Listed Waterbody Monitoring: The Permittees shall continue to participate in the Regional Monitoring Programs for the San Diego Creek Nutrient TMDL and the Toxics TMDL.

3. In addition, strategies must be revised/developed to evaluate the impacts of storm water or non-storm water runoff on all impairments within the Newport Bay watershed and other 303(d) listed waterbodies. Since the 303(d) listing is dynamic, with new waterbodies and new impairments being identified over time, the permittees shall revise their monitoring plan to incorporate new information as it becomes available.

IV. PROGRAM EFFECTIVENESS ASSESSMENT AND REPORTING

1. All progress reports and proposed strategies and plans required by this order shall be signed by the principal permittee, and copies shall be submitted to the Executive Officer of the Regional Board under penalty of perjury.

2. The permittees shall submit an ANNUAL PROGRESS REPORT to the Executive Officer of the Regional Board and to the Regional Administrator of the U.S. EPA, Region 9, no later than November 15th, of each year. This progress report may be submitted in a mutually agreeable electronic format. At a minimum, annual progress report shall include the following:

a) A review of the status of program implementation and compliance (or non-compliance) with the schedules contained in this order;

b) An assessment of the effectiveness of control measures established under the illicit discharge elimination program and the Drainage Area Management Plan. The effectiveness may be measured in terms of how successful the program has been in eliminating illicit/illegal discharges and reducing pollutant loads in storm water discharges;

c) As assessment of control measures and their effectiveness in addressing pollutants causing or contributing to an exceedance of water quality objectives in receiving waters that are on the 303(d) list of impaired waters.

d) The annual report shall include an overall program assessment. The permittees may use the "Municipal Stormwater Program Effectiveness Assessment Guidance" developed by the California Stormwater Quality Association in May 2007 as guidance for assessing program activities at the various outcome levels. The assessment should include each program element required under this order, the expected outcome and the measures used to assess the outcome. The permittees may propose any other methodology for program assessment using measurable targeted outcomes.

e) Each permittee shall develop and implement a plan and schedule to address program modifications and improvements identified during the program assessment.

f) A summary and analysis of monitoring results from the previous year and any changes to the monitoring program for the following year;

g) A unified fiscal accountability analysis, as described in Section XX., Provision, 2, of this order;

h) A draft workplan which describes the proposed implementation of the DAMP for next fiscal year. The workplan shall include clearly defined tasks, responsibilities, and schedules for implementation of the storm water program and each permittee actions for the next fiscal year;

i) Major changes in any previously submitted plans/policies; and

j) An assessment of the permittees compliance status with the Receiving Water Limitations, Section IV of the Order, including any proposed modifications to the DAMP if the Receiving Water Limitations are not fully achieved.

3. The permittees shall be responsible for the submittal to the principal permittee of all required information/materials needed to comply with this order in a timely manner. All such submittals shall be signed by a duly authorized representative of the permittee under penalty of perjury.

4. The data transmittals to the Regional Board shall be in the form developed by the Stormwater Monitoring Coalition (SMC) and approved by the State Water Resources Control Board in the document entitled "Standardized Data Exchange Formats." This document was developed in order to provide a standard format for all data transfer so that data can universally be shared and evaluated from various programs.

V. REPORTING SCHEDULE

All reports required by this order shall be submitted to the Executive Officer of the Regional Board in accordance with the following schedule:

ITEM	COMPLETION DATE	REPORT DUE DATE
Review planning procedures and CEQA document preparation processes	Within 24 months of adoption	Annual Report
Public Education Committee Meetings	Twice/year	Annual Report
Review DAMP	Annually	Annual Report
Public education workshops	Annually	Annual Report
Update inventory of construction sites and prioritize for inspections	Twice/year	Annual Report
Inspect municipal facilities	Annually	Annual Report
Maintain drainage facilities	80% annually/100% in every two years	Annual Report
Review/revise Implementation Agreement	Within 6 months of adoption	Annual Report
Review/revise Illegal Discharge/Illicit Connection Training Program	Within 6 months of adoption	Annual Report
Evaluate the need for additional debris control measures	Within 12 months of adoption	Annual Report
Complete Public Awareness Survey	July 1, 2012	Annual Report
Review Monitoring Program	Annually	Annual Report
Update industrial site database, including prioritization for inspection	Annually	Annual Report
Update the commercial site database, including prioritization for inspection	Quarterly	Annual Report
Develop a mobile business pilot program	Within 12 months of adoption	Annual Report
Residential common interest area/HOA pilot program	Within 18 months of adoption	Annual Report

Develop a guidance document for preparing conceptual WQMP	Within twelve months of adoption	Annual Report
Review planning documents to ensure water quality protection	Within 24 months of adoption	Annual Report
Report of Waste Discharge	180 days before permit expires	Six months prior to expiration
Annual Report/Fiscal Analysis	November 15th of each year	November 15
Provide training to public agency staff and to contract field operations staff	Once in two years/3 per permit term	November 15
Re-evaluate monitoring program priorities based on previous year's data	Annually	November 15
Evaluate the DAMP	Annually	November 15
Permittee Committee meetings to discuss permit implementation and regional and state-wide issues	Held at least 6 times each year	November 15

Ordered by _____
Gerard J. Thibeault
Executive Officer

TAB "2"

State of California
California Regional Water Quality Control Board
Santa Ana Region
3737 Main Street, Suite 500
Riverside, CA 92501-3348

FACT SHEET

April 24, 2009

ITEM: 12

SUBJECT: Waste Discharge Requirements for the County of Orange, Orange County Flood Control District and the Incorporated Cities of Orange County within the Santa Ana Region, Areawide Urban Storm Water Runoff Management Program, Orange County, Order No. R8-2009-0030 (NPDES No. CAS 618030)

I. INTRODUCTION

The 1972 Clean Water Act (CWA) established the National Pollutant Discharge Elimination System (NPDES) permit program to regulate the discharge of pollutants from point sources to waters of the United States (US). Since then, considerable strides have been made in reducing conventional forms of pollution, such as from sewage treatment plants and industrial facilities, through the implementation of the NPDES program and other federal, state and local programs. The adverse effects of some of the persistent toxic pollutants (DDT, PCB, TBT) were addressed through manufacturing and use restrictions and through cleanup of contaminated sites. On the other hand, pollution from land runoff (including atmospheric deposition, urban, suburban and agricultural) was largely unabated until the 1987 CWA amendments. As a result, diffuse sources, including urban storm water runoff, now contribute a larger portion of many kinds of pollutants than the more thoroughly regulated sewage treatment plants and industrial facilities. The National Urban Runoff Program (NURP) final report to the Congress (US EPA, 1983) concluded that the goals of the CWA could not be achieved without addressing urban runoff discharges. The 1987 CWA amendments established a framework for regulating urban storm water runoff. Pursuant to these amendments, the Santa Ana Regional Water Quality Control Board (Regional Board) began regulating municipal storm water runoff in 1990.

The attached pages contain information concerning an application for renewal of Waste Discharge Requirements and a NPDES permit, which prescribes waste discharge requirements for urban storm water runoff from the cities and unincorporated areas in Orange County within the jurisdiction of the Santa Ana Regional Board. On July 21, 2006, the County of Orange and the Orange County Flood Control District (OCFCD), in cooperation with the cities of Anaheim, Brea, Buena Park, Costa Mesa, Cypress, Fountain Valley, Fullerton, Garden Grove, Huntington Beach, Irvine, Laguna Hills, Laguna Woods, La Habra, La Palma, Lake Forest, Los Alamitos, Newport Beach, Orange, Placentia, Santa Ana, Seal Beach, Stanton, Tustin, Villa Park, Westminster, and Yorba Linda (hereinafter collectively referred to as permittees or dischargers), submitted NPDES Application No. CAS 618030 (Report of Waste Discharge) for re-issuance of their areawide storm water NPDES permit. The permit application was submitted in accordance with the requirements of the previous NPDES permit (Order No. R8-2002-0010, NPDES No. CAS618030) which

expired on January 19, 2007. Additionally, the permit application follows guidance provided by staff of the State Water Resources Control Board (State Board), the Regional Water Quality Control Boards (Regional Boards), and the United States Environmental Protection Agency (US EPA).

On February 20, 2007, Order No. R8-2002-0010, NPDES No. CAS618030, was administratively extended in accordance with 40 CFR Part 122.6 and Title 23, Division 3, Chapter 9, §2235.4 of the California Code of Regulations.

Order No. R8-2009-0030 regulates discharges of urban storm water from the lower Santa Ana watershed to waters of the US, which ultimately drain into the Pacific Ocean.

II. REGULATORY BACKGROUND/CLEAN WATER ACT REQUIREMENTS

Urban runoff includes dry and wet weather flows and storm water runoff (collectively referred to as urban runoff) from urbanized areas through a storm water conveyance system. As water flows over streets, parking lots, construction sites, and industrial, commercial, residential and municipal areas, it can intercept pollutants from these areas and transport them to waters of the US. If appropriate pollution control measures are not implemented, urban runoff may contain pathogens (bacteria, protozoa, viruses), sediment, trash, fertilizers (nutrients, mostly nitrogen and phosphorus compounds), oxygen-demanding substances (decaying matter), pesticides (DDT, Chlordane, Diazinon, Chlorpyrifos), heavy metals (cadmium, chromium, copper, lead, zinc) and petroleum products (oil & grease, PAHs, petroleum hydrocarbons). If not properly managed and controlled, urbanization can change the stream hydrology and increase pollutant loading to receiving waters. As a watershed undergoes urbanization, pervious surface area decreases, runoff volume and velocity increase, riparian and wetland habitat decrease, the frequency and severity of flooding increase and pollutant loading increases. Most of these impacts are due to human activities that occur during and/or after urbanization. The pollutants and hydrologic changes can cause declines in aquatic resources, toxicity to marine organisms, and impact human health and the environment.

However, properly planned high-density development, with sufficient open space and low impact developments, can reduce urban sprawl and problems associated with sprawl. Urban in-fill development can be an element of smart growth, creating the opportunity to maintain relatively natural open space elsewhere in the area. The goal of low impact development is to produce post-construction runoff quality and quantity, to mimic that of pre-construction runoff quality and quantity.

The US EPA recognizes urban runoff as the number one source of estuarine pollution in coastal communities[1]. Studies[2] conducted in the Southern California area and other studies have reported a definite link between storm water runoff from urban areas and pollution in

[1] US EPA, 1999, 40CFR Parts 9, 122, 123, 124, National Pollutant Discharge Elimination System – Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges; Final Rule, 64FR 68727.

[2] Bay, S., Jones, B. H. and Schiff, K, 1999, Study of the Impact of Stormwater Discharge on Santa Monica Bay. Sea Grant Program, University of Southern California; and Haile, R.W., et. al., 1996, An Epidemiological Study of Possible Adverse Health Effects of Swimming in Santa Monica Bay.

nearshore zones. A number of Orange County beaches were closed during 1999 and 2000 due to microbial contamination. One of the studies conducted to determine the source of this microbial contamination indicated that urban runoff may be one of the sources of this contamination. If not properly controlled, urban runoff could be a significant source of pollutants in waters of the US. Table 1 includes a list of pollutants, their sources, and some of the adverse environmental consequences mostly resulting from urbanization.

Table 1[3]. Pollutants/Impacts of Urbanization on Waters of the US (Marine Pollution)

Pollutants	Sources	Effects and Trends
Toxins (e.g., biocides, PCBs, trace metals, heavy metals)	Industrial and municipal wastewaters; runoff from farms, forests, urban areas, and landfills; erosion of contaminated soils and sediments; vessels; atmospheric deposition	Poison and cause disease and reproductive failure; fat-soluble toxins may bioconcentrate, particularly in birds and mammals, and pose human health risks. Inputs into US waters have declined, but remaining inputs and contaminated sediments in urban and industrial areas pose threats to living resources.
Pesticides (e.g., DDT, diazinon, chlorpyrifos)	Urban runoff, agricultural runoff, commercial, industrial, residential, and farm use	Legacy pesticide (DDT, Chlordane, Dieldrin, etc.) use has been banned; still persists in the environment; some of the other pesticide uses are curtailed or restricted.
Biostimulants (organic wastes, plant nutrients)	Sewage and industrial wastes; runoff from farms and urban areas; nitrogen from combustion of fossil fuels	Organic wastes overload bottom habitats and deplete oxygen; nutrient inputs stimulate algal blooms (some harmful), which reduce water clarity, cause loss of seagrass and coral reef, and alter food chains supporting fisheries. While organic waste loadings have decreased, nutrient loadings have increased.
Petroleum products (oil, grease, petroleum hydrocarbons, PAHs)	Urban runoff and atmospheric deposition from land activities; shipping and tanker operations; accidental spills; coastal and offshore oil and gas production activities; natural seepage; PAHs from internal combustion engines	Petroleum hydrocarbons can affect bottom organisms and larvae; spills affect birds, mammals and nearshore marine life. While oil pollution from ships, accidental spills, and production activities has decreased, diffuse inputs from land-based activities have not.
Radioactive isotopes	Atmospheric fallout, industrial and military activities	Few known effects on marine life; bioaccumulation may pose human health risks where contamination is heavy.

[3]Adapted from "Marine Pollution in the United States" prepared for the Pew Oceans Commission, 2001.

Sediments	Erosion from farming, construction activities, forestry, mining, development; river diversions; coastal dredging and mining	Reduce water clarity and change bottom habitats; carry toxins and nutrients; clog fish gills and interfere with respiration in aquatic fauna. Sediment delivery by many rivers has decreased, but sedimentation poses problems in some areas; erosion from coastal development and sea-level rise is a future concern.

Plastics and other debris	Ships, fishing nets, containers, trash, urban runoff	Entangles marine life or is ingested; degrades beaches, wetlands and nearshore habitats. Floatables (from trash) are an aesthetic nuisance and can be a substrate for algae and insect vectors.
Thermal	Cooling water from power plants and industry, urban runoff from impervious	Kills some temperature-sensitive species; displaces others. Generally, less a risk to marine life than thought 20 years ago.
Noise	Vessel propulsion, sonar, seismic prospecting, low-frequency sound used in defense and research	May disturb marine mammals and other organisms that use sound for communication.
Pathogens (bacteria, protozoa, viruses)	Sewage, urban runoff, livestock, wildlife, discharges from boats and cruise ships	Pose health risks to swimmers and consumers of seafood. Sanitation has improved, but standards have been raised.
Alien species	Ships and ballast water, fishery stocking, aquarists	Displace native species, introduce new diseases; growing worldwide problem.

The Clean Water Act (CWA) prohibits the discharge of any pollutant to navigable waters from a point source unless an NPDES permit authorizes the discharge. Efforts to improve water quality under the NPDES program traditionally and primarily focused on reducing pollutants in discharges of industrial process wastewater and municipal sewage. The 1987 amendments to the CWA required municipal separate storm sewer systems (MS4s) and industrial facilities, including construction sites, to obtain NPDES permits for storm water runoff from their facilities. On November 16, 1990, the United States Environmental Protection Agency (EPA) promulgated the final Phase I storm water regulations. The storm water regulations are contained in 40 CFR Parts 122, 123 and 124.

The areawide NPDES permit for Orange County areas within the Santa Ana Regional Board's jurisdiction is being considered for renewal in accordance with Section 402 (p) of the CWA and all requirements applicable to an NPDES permit issued under the issuing authority's discretionary authority. The requirements included in this order are consistent with the CWA, the federal regulations governing urban storm water discharges, the Water Quality Control Plan for the Santa Ana River Basin (Basin Plan), the California Water Code, and the State Board's Plans and Policies, including the Ocean Plan.

The Basin Plan is the basis for the Regional Board's regulatory programs. The Plan was developed and is periodically reviewed and updated in accordance with relevant federal and state law and regulations, including the Clean Water Act and the California Water Code. As required, the Basin Plan designates the beneficial uses of the waters of the region and specifies water quality objectives intended to protect those uses. (Beneficial uses and water quality objectives, together with an antidegradation policy, comprise federal "water quality standards"). The Basin Plan also specifies an implementation plan, which includes certain discharge prohibitions. In general, the Basin Plan makes no distinctions between wet and dry weather conditions in designating beneficial uses and setting water quality objectives, i.e., the beneficial uses, and correspondingly, the water quality objectives are assumed to apply year-round. (Note: In some cases, beneficial uses for certain surface waters are

designated as "I", or intermittent, in recognition of the fact that surface flows (and beneficial uses) may be present only during wet weather.) Most beneficial uses and water quality objectives were established in the 1971, 1975 and 1983 Basin Plans.

Water Code Section 13241 requires that certain factors be considered, at a minimum, when water quality objectives are established. These include economics and the need for developing housing in the Region. (The latter factor was added to the Water Code in 1987).

During the previous permit (R8-2002-0010) development process, the permittees raised an issue regarding compliance with Section 13241 of the California Water Code with respect to water quality objectives for wet weather conditions, specifically the cost of achieving compliance during wet weather conditions and the need for developing housing within the Region and its impact on urban storm water runoff. In response to this request, Regional Board staff in collaboration with the permittees in the region has organized a Storm Water Quality Standards Task Force. In the meantime, the provisions of this order will result in reasonable further progress towards the attainment of the existing water quality objectives, in accordance with the discretion in the permitting authority recognized by the United States Court of Appeals for the Ninth Circuit in Defenders of Wildlife v Browner, 191 F.3d 1159, 1164 (9th Cir. 1999).

III. BENEFICIAL USES

Storm water flows that are discharged to municipal storm drain systems in Orange County are tributary to various water bodies (inland surface streams, bays and tidal prisms, ocean waters, lakes and reservoirs) of the state. The beneficial uses of these water bodies include municipal and domestic supply, agricultural supply, industrial service and process supply, groundwater recharge, navigation, hydropower generation, water contact recreation, non-contact water recreation, commercial and sportfishing, warm freshwater habitat, cold freshwater habitat, preservation of biological habitats of special significance, wildlife habitat, preservation of rare, threatened or endangered species, marine habitat, shellfish harvesting, spawning, reproduction and development of aquatic habitats and estuarine habitat. The ultimate goal of this storm water management program is to protect the water quality standards of the receiving waters.

IV. PERMITTED AREA

The permitted area is delineated by the Los Angeles County-Orange County boundary line on the northwest, the San Bernardino-Orange County boundary line on the north and northeast, the Riverside County-Orange County boundary line on the east, the Santa Ana Regional Board-San Diego Regional Board boundary line on the southeast, and the Pacific Ocean on the southwest (see Attachment A of the order). The permittees serve a population of approximately 3.006[4] million, occupying an area of approximately 789 square miles (including unincorporated areas and the limits of 34 cities, 26 of which are within the Santa Ana Regional Board's jurisdiction). The permittees have jurisdiction over, and/or maintenance responsibility for, storm water conveyance systems within Orange County. The County's systems include an estimated 400 miles of storm drain

[4] SCAG County Population Forecasts for 2005 (this is for the entire County) ((http://www.eltoroairport.org/issues/population.html)

systems. A major portion of the urbanized areas of Orange County drains into water bodies within this Regional Board's jurisdiction. Storm water discharges from urbanized areas consist mainly of surface runoff from residential, commercial, and industrial developments. In addition, there are storm water discharges from agricultural land uses, including farming and animal operations. However, the CWA specifically excludes agricultural discharges from regulation under this program. Other areas of the County not addressed or which are excluded by the storm water regulations and areas not under the jurisdiction of the permittees are excluded from the area requested for coverage under this permit. These excluded areas and activities include:

1. Federal lands and state properties, including, but not limited to, military bases, national forests, hospitals, schools, colleges, universities, and highways;
2. Native American tribal lands; and
3. Utilities and special district properties.

Discharges from the permitted area drain into the Pacific Ocean. The watersheds regulated under this order generally referred to as the San Diego Creek/Newport Bay watershed and the Lower Santa Ana River Basin.

V. WATERSHED MANAGEMENT/LOWER SANTA ANA RIVER BASIN

To manage the water resources of the Region efficiently, it is critical to have a holistic approach. The entire storm drain system in Orange County is not controlled by a single entity; the County of Orange, the OCFCD, several cities, Caltrans, US Army Corps of Engineers and a number of other entities own, operate and/or manage the storm drain systems. In addition to the cities, the County and the OCFCD, there are a number of other significant contributors of storm water runoff to these storm drain systems. These include: large institutions such as the State University facilities, schools, hospitals, etc.; federal facilities such as Department of Defense facilities; State agencies such as Caltrans; water and wastewater management agencies such as Orange County Water District, Metropolitan Water District etc.; the National Forest Service; state parks; and entertainment centers such as Disneyland. The quality and quantity of storm water runoff into and out of Orange County also depends upon runoff from San Bernardino and Riverside County areas that are tributary to Orange County. Some of the runoff from Orange County enters the San Gabriel River or systems controlled by other entities, such as the Los Angeles County Flood Control District, which are under the Los Angeles Regional Board's jurisdiction.

Some of these facilities, such as Disneyland and Caltrans, are already under individual permits for storm water runoff. The Los Angeles and San Diego Regional Boards have also issued areawide storm water permits for areas within their jurisdiction.

Cooperation and coordination among all the stakeholders is essential for efficient and economical management of the watershed. It is also critical to manage nonpoint sources at a level consistent with the management of urban storm water runoff in a watershed, in order to prevent or remedy water quality impairment. Regional Board staff will facilitate coordination of monitoring and management programs among the various stakeholders, where necessary.

An integrated watershed management approach is consistent with the Strategic Plan (2008-2012) for the State and Regional Boards. A watershed wide approach is also necessary for implementation of the load and waste load allocations developed under the TMDL process (see Section B, below). The MS4 permittees and all the affected entities should be encouraged to participate in regional or watershed solutions instead of project-specific and fragmented solutions.

The pollutants in urban runoff originate from a multitude of sources and effective control of these pollutants requires a cooperative effort of all the stakeholders and many regulatory agencies. Every stage of urbanization should be considered in developing appropriate urban runoff pollution control methodologies. The program's success depends upon consideration of pollution control techniques during planning, construction and post-construction operations. At each stage, appropriate pollution prevention measures, proper site design considerations, source control measures and, if necessary, treatment techniques should be considered.

1. SUB-WATERSHEDS AND MAJOR CHALLENGES

The Lower Santa Ana River Watershed can be subdivided into five tributary watersheds:

a. *The San Gabriel River Drainage Area:* Carbon Canyon Creek and Coyote Creek drain into the San Gabriel River. Only a portion of the San Gabriel River is within the Santa Ana Regional Board's jurisdiction. The River empties into the Pacific Ocean at the boundary between two Regional Boards (Regions 4 and 8). Region 4 regulates most of the discharges to the San Gabriel River.

The Los Angeles Regional Board (Region 4) listed the San Gabriel River as an impaired waterbody on the CWA Section 303(d) list of impaired waters. It is listed for ammonia, toxicity, algae, eutrophication, pH, odors, low dissolved oxygen, trash, lead, arsenic, copper, silver, mercury (tissue), coliform, DDT, PCBs, chlordane, and abnormal fish histology. A trash TMDL for the East Fork of the River was adopted by the Regional Board (Region 4) and approved by the US EPA. On July 13, 2006, the Los Angeles Regional Board adopted TMDLs for metals in the San Gabriel River watershed. However, because of the state's inability to meet the March 2007 deadline for an approved TMDL prescribed in a consent decree (Heal the Bay Inc., et al. v. Browner C98-4825 SBA), on March 26, 2007, the EPA promulgated TMDLs for metals and selenium for the San Gabriel River. The upper portions of Coyote Creek flow through Orange County to join the San Gabriel River above the tidal prism. Other unnamed tributaries located in northwestern Orange County also discharge into the San Gabriel River estuary. The EPA promulgated TMDLs include wet weather wasteload allocations for Coyote Creek for copper, lead and zinc and dry weather wasteload allocations for copper for Coyote Creek. The permittees are expected to implement programs and policies consistent with the metals and selenium TMDLs for the San Gabriel River

watershed. This includes constituent-specific source control programs or other equally effective programs to control the discharge of copper, lead and zinc into Coyote Creek and other tributaries in Orange County that discharge into the San Gabriel River.

b. *The Huntington Harbour and Bolsa Bay Drainage Area:* This includes Anaheim Bay, Huntington Habour, Bolsa Bay, and Bolsa Chica Ecological Reserve. A number of flood control channels discharge into this area, including Anaheim-Barber, East Garden Grove-Wintersberg, and Bolsa Chica Channel. The area historically had a number of oil production facilities and an oil-well drilling mud disposal area. There are still some production wells in the area. Certain areas of the Bolsa Chica wetlands have been impacted by the oil production and related activities in the area. The drilling mud disposal area has been cleaned up, and through a collaborative effort of a number of state, federal, and local agencies and other entities the Bolsa Chica wetlands have been restored.

   Anaheim Bay and Huntington Harbour are listed as impaired waterbodies (see Table 2), and TMDLs will be developed to address the pollutants causing the impairment.

c. *The Santa Ana River Drainage Area:* This includes Santa Ana River Reaches 1 and 2, Santiago Creek Reaches 1, 2, 3 and 4, Silverado Creek, Black Star Creek, Talbert Channel, Talbert Marsh and Greenville-Banning Channel. The major problem for the area is microbial contamination of the coastal zone. The initial studies conducted by the Orange County Sanitation District determined that their facilities were probably not the cause of the microbial problems in the nearshore zone. Subsequently, the Executive Officer issued a directive to the County of Orange and the cities of Santa Ana, Costa Mesa, Fountain Valley and Huntington Beach (urban storm water dischargers to this tributary area) under Section 13267 of the Water Code. This directive required the dischargers to provide a plan to identify, characterize and control sources that contributed to the microbial problems in the Huntington Beach area. Several studies were conducted to trace the source(s) of the microbial contamination. These studies could not conclusively determine the sources of microbial contamination in the Huntington Beach area. However, urban runoff was identified as one of the sources. The permittees have diverted most of the dry-weather flows to the sanitary sewer system and significant improvements have been noted in the beach water quality.

d. *The Newport Bay Drainage Area:* Tributaries include Bonita Creek, Serrano Creek, Peters Canyon Wash, Hicks Canyon Wash, Bee Canyon Wash, Borrego Canyon Wash, Agua Chinon Wash, Laguna Canyon Wash, Rattlesnake Canyon Wash, Sand Canyon Wash, San Diego Creek Reaches 1 and 2, and San Joaquin Freshwater Marsh.

   The Newport Bay watershed has a number of impaired waterbodies listed under Section 303(d) of the CWA (see Section 2, below for

details). The impairments are mostly due to nutrients, sediment, pesticides, pathogens and metals. To date, TMDLs have been developed for nutrients, sediment, and fecal coliform bacteria and some of the pesticides (diazinon and chlorpyrifos). These TMDLs are being implemented. The current and future (year 2012) targets for the nutrient TMDLs are already being met. However, Board staff is currently reevaluating the nutrient TMDLs in light of evidence that there remains impairment of these waters due to eutrophication. In addition, toxics TMDLs were promulgated by USEPA on June 14, 2002, including TMDLs for metals and selenium, and a TMDL specific to the Rhine Channel located in Lower Newport Bay. The Regional Board is in the process of developing TMDL implementation plans for these TMDLs.

The Irvine Ranch Water District (IRWD), which provides sewage collection and treatment services for most areas in this watershed, has been also accepting dry weather flows from some of the storm sewer systems. The IRWD constructed a number of water quality treatment wetlands for treating urban storm water runoff. These treatment wetlands are strategically located to capture and treat flows from different portions of the watershed. The IRWD also sponsored legislation that authorizes the District to collect storm water fees for maintenance of these treatment wetlands. These treatment wetlands are designed to remove sediment and nutrients from urban runoff but may be less efficient in removing pathogens and toxics (metals, pesticides, etc.). It is anticipated that a combination of site design, source control and other best management practices and these treatment wetlands will help to control the discharge of pollutants in urban runoff.

e *Irvine Coast and Newport Coast Areas of Special Biological Significance (ASBSs)* The Ocean Plan has 35 designated areas of special biological significance throughout the State; two of these ASBSs are within the Santa Ana Region, Irvine Coast Areas of Special Biological Significance, Newport Coast Areas of Special Biological Significance. The ASBSs require protection of species or biological communities to the extent that alteration of natural water quality is undesirable. The Crystal Cove area, which is within the Irvine Coast ASBS, is currently experiencing increased urban runoff from new developments in the area. The Ocean Plan contains a prohibition on discharges of wastes to ASBS. The State Board has developed conditions for special protection of ASBSs. All waste discharges to the ASBS are governed by the prohibition in the Ocean Plan are subject to the special protections prescribed by the State Board.

2. CWA SECTION 303(d) LIST AND TMDLs:

The 2006 water quality assessment conducted by the Regional Board identified a number of waterbodies within the Region as impaired waterbodies, under Section 303(d) of the CWA. These are waterbodies where the designated beneficial uses are not met and/or the water quality objectives are being violated. These waterbodies were placed on the CWA Section 303(d) list of impaired waters. The impaired waterbodies in Orange County within the Santa Ana Regional Board's jurisdiction are listed in Table 2.

Federal regulations require that a total maximum daily load (TMDL) be established for each 303(d) listed waterbody for each of the pollutants causing impairment. The TMDL is the total amount of the problem pollutant that can be discharged while water quality standards in the receiving water are attained, i.e., water quality objectives are met and the beneficial uses are protected. It is the sum of the individual wasteload allocations (WLA) for point source inputs, load allocations (LA) for non-point source inputs and natural background, with a margin of safety. The TMDLs are the basis for limitations established in waste discharge requirements. TMDLs have been developed for sediment and nutrients for San Diego Creek and Newport Bay and for fecal coliform bacteria in Newport Bay. The stakeholders in this watershed are collaborating in the development and implementation of the TMDLs. The Regional Board's Executive Officer has issued requirements for the submittal and implementation by the responsible parties of plans and schedules to address the TMDL requirements.

Table 2. Clean Water Act Section 303(d) Listed Waterbodies

Water Body	**Hydro Unit**	**Pollutant Stressor**	**Source**	**Priority**	**Size Affected**	**Unit**	**TMDL End Date**
Anaheim Bay	80111000	Nickel[5]	Source Unknown	Medium	402	Acres	2019
		Dieldrin[6]	Source Unknown	Medium	402	Acres	2019
		PCBs[7]	Source Unknown	Medium	402	Acres	2019
		Sediment Toxicity	Source Unknown	Medium	402	Acres	2019
Balboa Beach	80114000	Pesticides[8]	Source Unknown	Medium	1.8	Miles	2019
		PCBs	Source Unknown	Medium	1.8	Miles	2019
Bolsa Chica State Beach	80111000	Metals (copper and nickel)	Source Unknown	Medium	2.6	Miles	2019
Buck Gully Creek	80111000	Pathogens	Source Unknown	Medium	0.3	Miles	2019

[5] EPA listing
[6] EPA listing
[7] EPA listing
[8] DDT and Dieldrin

Huntington Beach State Park	80111000	Pathogens (Entrococcus and indicator bacteria)	Source Unknown	Medium	5.8	Miles	2019
		PCBs	Source Unknown	Medium	5.8	Miles	2019
Huntington Harbour	80111000	Metals (copper, lead, nickel)	Source Unknown	Medium	221	Acres	2019
		Pathogens	Urban Runoff/Storm Sewers	Medium	221	Acres	2019
		Chlordane	Source Unknown	Medium	221	Acres	2019
		PCBs	Source Unknown	Medium	221	Acres	2019
		Sediment Toxicity	Source Unknown	Medium	221	Acres	2019
Los Trancos Creek (Crystal Cove Creek)	80111000	Pathogens (fecal coliform, total coliform)	Source Unknown	Medium	0.19	Miles	2019
Newport Bay, Lower	80111000	Nutrients	Source Unknown	High	767	Acres	1999
		Chlordane	Source Unknown	Medium	767	Acres	2019
		DDT	Source Unknown	Medium	767	Acres	2019
		Copper	Source Unknown	High	767	Acres	2007
		PCBs	Source Unknown	Medium	767	Acres	2019
		Sediment Toxicity	Source Unknown	Medium	767	Acres	2019

Newport Bay, Upper Ecological Reserve	80111000	Nutrients	Source Unknown	High	653	Acres	1999
		Copper	Source Unknown	High	653	Acres	2007
		Chlordane	Source Unknown	Medium	653	Acres	2019
		Metals	Urban Runoff Storm Sewers	Medium	653	Acres	2019
		DDT	Source Unknown	Medium	653	Acres	2019
		PCBs	Source Unknown	Medium	653	Acres	2019
		Sediment Toxicity	Source Unknown	Medium	653	Acres	2019
Peters Canyon Channel	80111000	Pesticides (DDT, Toxaphene)	Source Unknown	Medium	3	Miles	2019
Rhine Channel	80114000	Metals (copper, lead, mercury, zinc)	Source Unknown	Medium	20	Acres	2019
		PCBs	Source Unknown	Medium	20	Acres	2019
		Sediment Toxicity	Source Unknown	Medium	20	Acres	2019

San Diego Creek, Reach 1	80111000	Nutrients	Source Unknown	High	7.8	Miles	1999
		Selenium	Source Unknown	High	7.8	Miles	2007
		Fecal Coliform	Urban Runoff/Storm Sewers Other Urban Runoff	Medium	7.8	Miles	2019
		Toxaphene	Source Unknown	Medium	7.8	Miles	2019
San Diego Creek Reach 2	80111000	Nutrients	Agriculture, Urban Runoff/Storm Sewer, Groundwater Loadings	High	6.3	Miles	1999
		Metals	Urban Runoff/Storm Sewers	High	6.3	Miles	2007
Santiago Creek R4	80112000	Salinity/ TDS/ Chlorides	Source Unknown	Low	9.8	Miles	2019
Seal Beach	80111000	Enterococcus	Source Unknown	Low	0.53	Miles	2019
		PCBs	Source Unknown	Low	0.53	Miles	2019
Silverado Creek	80112000	Pathogens	Unknown Nonpoint Source	Low	11	Miles	2019
		Salinity/ TDS/ Chlorides	Unknown Nonpoint Source	Low	11	Miles	2019

The proposed order includes numeric effluent limits based on the wasteload/load allocations developed and approved by the Regional Board, State Board, Office of Administrative Law and the EPA.

VI. FIRST, SECOND AND THIRD TERM PERMITS: STORM WATER POLLUTION CONTROL PROGRAMS/POLICIES

Prior to EPA's promulgation of the final storm water regulations, the counties of Orange, Riverside and San Bernardino applied for areawide NPDES permits for storm water runoff. On July 13, 1990, the Regional Board issued Order No. 90-71 to the permittees (first term permit). On March 8, 1996, the Board adopted Order No. 96-31 (second term permit). On January 18, 2002, the Board adopted Order No. R8-2002-0010 (third term permit). These permits included the following requirements as outlined in the storm water regulations:

a. Prohibited non-storm water discharges to the MS4s, with certain exceptions.

b. Required the municipalities to develop and implement a drainage area management plan (DAMP) to reduce pollutants in urban storm water runoff to the maximum extent practicable (MEP[9]).

c. Required the discharges from the MS4s to meet water quality standards in receiving waters.

d. Required the municipalities to identify and eliminate illicit connections and illicit discharges to the MS4s.

e. Required the municipalities to establish and maintain legal authority to enforce storm water regulations.

f. Required monitoring of dry weather flows, storm flows, and receiving water quality, and required program assessment.

g. Required the permittees to identify and inspect construction sites and industrial and commercial facilities.

h. Required the permittees to develop and implement a Water Quality Management Plan to address post-development runoff.

The following programs and policies have been implemented or are being implemented by the permittees. During the first term permit, the permittees developed a Drainage Area Management Plan (1993 DAMP) which was approved by the Executive Officer of the Regional Board on April 29, 1994. The 1993 DAMP included a number of best management practices (BMPs) and a very extensive public education program. The 1993 DAMP was updated a number of times and a draft 2007 version of the DAMP was submitted with the permit renewal application. The monitoring program for the first term permit included 89 monitoring stations within streams and flood control channels and 21 stations within the bays, estuaries and the ocean. The findings and conclusions from these monitoring stations and monitoring programs of other municipal permittees (Riverside and San Bernardino Counties and others) were used to identify problem areas and to re-evaluate the monitoring program and the effectiveness of the BMPs. The direction of these program elements were depended upon the results of the ongoing studies and a holistic approach to watershed management.

Other elements of the storm water management program included identification and elimination of illicit discharges and illicit connections and establishment of adequate legal authority to control pollutants in storm water discharges. The permittees have completed a survey of their storm drain systems to identify illicit discharges/illicit connections and have adopted appropriate ordinances to establish legal authority. Some of the more specific achievements during the previous term permits are as follows:

1. *Interagency Agreements and Coordination*: Established a program management structure through an Interagency Implementation Agreement. Participated in regional monitoring programs and focused special studies/research programs.

[9] Maximum Extent Practicable (MEP) means to the maximum extent feasible, taking into account equitable considerations of synergistic, additive, and competing factors, including but not limited to, gravity of the problem, technical feasibility, fiscal feasibility, public health risks, societal concerns, and social benefits.

Worked with the County Sanitation Districts, Health Care Agency, Integrated Waste Management Agency, and the Water Districts to provide a consistent urban storm water pollution control message to the public. Worked with Caltrans, other transportation agencies, the Storm Water Quality Task-Force, and others to further study and understand urban runoff problems and control measures. Supported regional studies to improve storm water management programs and monitoring programs through the Southern California Water Research Project.

i. *Ordinances, Plans and Policies:* Adopted a Model Water Quality Ordinance and Enforcement Consistency Guide; prepared a Water Pollution Enforcement Implementation Plan, Public Agency Activity BMP guideline, a Public Pesticide and Fertilizer Use Guideline, Criteria for MS4 Inspections, and a Water Quality Monitoring Plan, Model Water Quality Management Plan; and established a Technical Advisory Committee for overall program development and implementation.

j. *Program Review*: A number of existing programs were reviewed to determine their effectiveness in combating urban pollution and to recommend alternatives and or improvements, including litter control measures, street sweeping frequencies and methods, public agency activities and facilities, illicit discharges and illicit connections to the MS4 systems, and existing monitoring programs.

k. *Public Education:* A number of steps were taken to educate the public, businesses, industries, and commercial establishments regarding their role in urban runoff pollution controls. The appropriate industrial dischargers were notified of the storm water regulatory requirements. For a number of unregulated activities, BMP guidance (Fact Sheet) was developed (mobile detailing, automotive service centers, restaurants, pool maintenance). Finally, a countywide hotline was established for reporting any suspected water quality problems. The addition of the Residential Program to the fourth term permit includes requirements for permittees to identify residential areas and activities therein that are potential sources of pollutants and to develop Fact Sheets/BMPs for each and encourage residents to implement the pollution prevention measures.

l. *Public Agency Training:* Training was provided to public agency employees on how to implement New Development Guidelines and Public Works BMPs, how to conduct investigations of reported water quality problems and how to conduct inspections of industrial facilities, construction sites and public work projects. The municipal planners were trained to recognize water quality related problems in proposed developments. The fourth term permit includes additional training program requirements for storm water program managers and inspection staff. This was added following information collected during Regional Board staff audits of permittee's storm water management programs, which found that many of the permittee's storm water staff were inadequately trained to properly implement the required program elements contained within the third term permit.

m. *Related Activities:* Flood control channels were stabilized, sediment basins were constructed, and debris booms were installed; illicit connections were eliminated and illicit connections to the MS4s were documented , eradicated or permitted. During the third term permit, litter/trash control ordinances were reviewed and revised, and trash characterization programs were encouraged. Within the fourth term permit, a trash control element has been added as a requirement.

VII. PRIOR TERM PERMITS - WATER QUALITY IMPROVEMENTS

An accurate and quantifiable measurement of the impact of the above stated storm water management programs is difficult for a variety of reasons, such as the variability in chemical water quality data, the incremental nature of BMP implementation, lack of baseline monitoring data, and the existence of some of the programs and policies prior to initiation of formal storm water management programs. There are generally two accepted methodologies for assessing water quality improvements: (1) conventional monitoring such as chemical-specific water quality monitoring; and (2) non-conventional monitoring such as monitoring of the amount of household hazardous waste collected and disposed off at appropriate disposal sites, amount of used oil collected, debris removed by the debris boom, etc.

The water quality monitoring data collected during prior permit terms did not indicate any discernible trends or significant changes. However, the most recent monitoring data indicate that there are reductions in the mass loading rates for some of the metals like copper and zinc and improvements in beach water quality after diversion of dry weather flows to the sanitary sewers. The non-conventional monitoring data also indicate that other programs and policies have been very effective in keeping a significant quantity of wastes from being discharged into waters of the US.

During the second and third term permits, there was an increased focus on watershed management initiatives and coordination among the municipal permittees in Orange, Riverside and San Bernardino Counties. These efforts resulted in a number of regional monitoring programs and other coordinated program and policy developments.

It is anticipated that with continued implementation of the revised DAMP and other requirements specified in this order, including low impact developments, the goals and objectives of the storm water regulations will be met, including protection of water quality standards for all receiving waters.

VIII. FUTURE DIRECTION/2007 DRAFT DAMP

The NPDES permit renewal application included a revised draft of the DAMP (2007 DAMP) that includes programs and policies the permittees are proposing to implement during the fourth term permit. The 2007 draft DAMP is the principal guidance document for urban storm water management programs in Orange County and includes the following major components:

1. Continues to provide a framework for the program management activities and plan development.

    n. Continues to provide the legal authority to control discharges to the MS4s.

    o. Improves current BMPs to achieve further reduction in pollutant loading to the MS4s.

    p. Continues to include programs and policies for public education processes and to seek public support for urban storm water pollution prevention BMPs.

    q. Increases requirements for controls on new developments and significant redevelopments.

    r. Continues to ensure that construction sites implement appropriate pollution control measures during construction and effective post-construction water quality management plan (WQMP) implementation.

    s. Continues to ensure that industrial sites are adequately identified, categorized and inspected for compliance with storm water regulations.

    t. Continues to include programs and policies to eliminate illicit discharges and illicit connections to the MS4s.

    u. Continues to include monitoring of urban runoff.

    v. Includes provisions for any special focus studies and/or control measures.

A combination of these programs and policies and the requirements specified in this order should ensure control of pollutants in storm water runoff from facilities owned and/or controlled by the permittees.

IX. PERMIT REQUIREMENTS

The legislative history of storm water statutes (1987 CWA Amendments), US EPA regulations (40CFR Parts 122, 123, and 124), and clarifications issued by the State Water Resources Control Board (State Board Orders No. WQ 91-03 and WQ 92-04) indicate that a non-traditional NPDES permitting strategy was anticipated for regulating urban storm water runoff. Due to the economic and technical infeasibility of full-scale end-of-pipe treatments and the complexity of urban storm water runoff quality and quantity, MS4 permits generally include narrative requirements for the implementation of BMPs in place of numeric effluent limits.

The requirements included in this order are meant to specify those management practices, control techniques and system design and engineering methods that will result in maximum extent practicable protection of the beneficial uses of the receiving waters. The State Board (Orders No. WQ 98-01 and WQ 99-05) concluded that MS4s must meet the technology-based maximum extent practicable (MEP) standard and water quality standards (water quality objectives and beneficial uses). The US Court of Appeals for the Ninth Circuit

subsequently held that strict compliance with water quality standards in MS4 permits is at the discretion of the local permitting authority. Any requirements included in the order that are more stringent than the federal storm water regulations are in accordance with the CWA Section 402(p)(3)(iii), and the California Water Code Section 13377 and are consistent with the Regional Board's interpretation of the requisite MEP standard.

The Report of Waste Discharge (ROWD) included a discussion of the current status of Orange County's urban storm water management program and the proposed programs and policies for the next five years (fourth term permit). The proposed order incorporates these documents and the performance commitments made in the ROWD.

This order recognizes the significant progress made by the permittees during the first, second and third term permits in implementing the storm water regulations. The permit also recognizes regional and innovative solutions to such a complex problem. For these reasons, the order is somewhat less prescriptive when compared to some of the MS4 NPDES permits for urban runoff issued by other Regional Boards. However, in many other respects, it incorporates an integrated watershed approach in solving urban runoff related water quality and quantity issues. The proposed permit also includes numeric effluent limits based on wasteload/load allocations. With these requirements, it should achieve the same or better water quality benefits because of the programs and policies already being implemented or proposed for implementation, including regional and watershed wide solutions.

The major requirements include: (1) Discharge prohibitions; (2) Receiving water limitations; (3) Prohibition on illicit connections and illicit discharges; (4) Public and business education; (5) Adequate legal authority; (6) Programs and policies for municipal facilities and activities; (7) Inspection Activities by the municipalities; (8) New development/re-development requirements including a requirement to fully implement low impact development principles and to minimize any hydrologic conditions of concern; (9) Waste load allocations for nutrients, sediment, and fecal coliform bacteria; metals, and pesticides, including numeric effluent limits; and (10) Monitoring and reporting requirements.

These programs and policies are intended to improve urban storm water quality and protect the beneficial uses of receiving waters of the region.

1. DISCHARGE PROHIBITIONS

   In accordance with CWA Section 402(p)(3)(B)(ii), this order prohibits the discharge of non-storm water to the MS4s, with a few exceptions. The specified exceptions are consistent with 40 CFR 122.26(d)(2)(iv)(B)(1). If the permittees or the Executive Officer determines that any of the exempted non-storm water discharges contain pollutants, a separate NPDES permit or coverage under the Regional Board's De Minimis permit will be required.

2. RECEIVING WATER LIMITATIONS

   Receiving water limitations are included to ensure that discharges from MS4 systems do not cause or contribute to violations of applicable water quality standards in receiving waters. The compliance strategy for receiving water limitations is consistent with the US EPA and State Board guidance and recognizes the complexity of storm water management.

This order requires the permittees to meet water quality standards in receiving waters in accordance with US EPA requirements as specified in State Board Order No. WQ 99-05. If water quality standards are not met by implementation of current BMPs, the permittees are required to re-evaluate the programs and policies and to propose additional BMPs. Compliance determination will be based on this iterative BMP implementation/compliance evaluation process.

3. ILLICIT DISCHARGES AND ILLICIT CONNECTIONS TO MS4s

The permittees have completed their survey of the MS4 systems and eliminated or permitted all identified illicit connections. The permittees have also established a program to address illicit discharges and a mechanism to respond to spills and leaks and other incidents of discharges to the MS4s. The permittees are required to continue these programs to ensure that the discharges from MS4s do not become a source of pollutants in receiving waters.

4. PUBLIC AND BUSINESS EDUCATION OUTREACH PROGRAM

Public outreach is an important element of the overall urban pollution prevention program. The permittees have committed to implement a strategic and comprehensive public education program to maintain the integrity of the receiving waters and their ability to sustain beneficial uses. The principal permittee has taken the lead role in the outreach program and has targeted various groups including businesses, industry, development, utilities, environmental groups, institutions, homeowners, school children, and the general public. The proposed order includes additional requirements to address runoff from residential developments. The permittees have developed a number of educational materials, established a storm water pollution prevention hotline, started an advertising and educational campaign and distribute public education materials at a number of public events. The permittees are required to continue these efforts and to expand public participation and education programs.

5. LEGAL AUTHORITY

During the first two permit cycles, each permittee adopted a number of ordinances, municipal codes, and other regulations to establish legal authority to control discharges to the MS4s and to enforce these regulations as specified in 40 CFR 122.26(d)(2)(I)(B, C, E, and F). The permittees are required to enforce these ordinances and to take enforcement actions against violators (40 CFR 122.26(d)(2)(iv)(A-D)). The enforcement activities undertaken by a majority of the permittees have consisted primarily of Notices of Violation, which act to educate the public on the environmental consequences of illicit discharges. Several coastline municipalities have regularly issue Citations. In the case of the County, additional action has sometimes included recovery of investigation and clean-up costs from a responsible party. In the event of egregious or repeated violations, the option exists for a referral to the County District Attorney for possible prosecution. In order to eliminate unauthorized, non-storm water discharges, reduce the amount of pollutants commingling with storm water runoff and thereby protect water quality, an additional level of enforcement is required between Notices of Violation and District Attorney referrals. The third term permit required the permittees to establish the authority and resources to administer either civil or criminal fines and/or penalties for violations of their local water quality ordinances (and the Federal Clean Water

Act). The permittees now have this authority for civil or criminal penalties. Within the fourth term permit, permittees are required to exercise this authority by developing an enforcement program to be administered within the industrial, commercial and construction elements of their storm water management programs. The enforcement program has been required to be included as an update to each permittee's respective Local Implementation Plan.

6. PUBLIC FACILITIES AND ACTIVITIES

Education of municipal planning, inspection, and maintenance staff is critical to ensure that municipal facilities and activities do not cause or contribute to an exceedance of receiving water quality standards. The second and third term permits required the permittees to prepare an Environmental Performance Report to address public agency facilities and activities that are not regulated under the State's General Industrial Activities Storm Water Permit. It also required the permittees to report on an annual basis the actions taken to eliminate the discharge of pollutants from public agency activities and facilities. The permittees are required to inspect and maintain drainage facilities free of waste materials to control pollutants in storm water runoff flowing through these systems. The proposed order requires the permittees to continue to re-evaluate their facilities and activities on an annual basis to see if additional BMPs are needed to ensure water quality protection.

7. MUNICIPAL INSPECTION PROGRAM

The third term permit included requirements for inspection of construction, industrial, and commercial facilities within the permittees' jurisdiction in order to control the loading of pollutants entering the MS4 system. The permittees were required to inventory construction, industrial and commercial facilities; prioritize those facilities with respect to their potential for discharge of pollutants in runoff and their proximity to sensitive receiving waters; and perform regular inspections to insure compliance with local ordinances. Within the fourth term permit, permittees are also to develop a pilot program targeted at mobile businesses (mobile detailers, pool & carpet cleaning, etc.) that have been identified as potential pollutant sources. While initial observations of non-compliance may result in 'educational' type enforcement, repeated non-compliance will result in more severe forms of enforcement, such as monetary penalties, stop work orders or permit revocation. Regional Board staff audits of permittees' storm water programs during the third term permit found that a large percentage of the permittees had characterized inventories of construction, industrial and commercial facilities within each permittee's respective jurisdiction. However, upon review of each permittees inventory and inspection data, Regional Board staff noted that criteria outlined within the third term permit regarding program element criteria yielded a wide range of interpretation between permittees. Therefore, more prescriptive requirements within this element of the permit are included in the fourth term permit. The fourth term permit has also added a residential program element to be implemented by the permittees. This element improves upon the existing requirements within the third term permit, by adding specific criteria associated with developing a more successful means of reducing the discharge of pollutants from residential areas into the MS4 to the maximum extent practicable.

8. NEW DEVELOPMENT

During the third term permit, the permittees developed and revised existing new development guidelines. The permittees were required to implement these guidelines, with program implementation of post construction Water Quality Management Plan (WQMP) criteria standards. Additionally, this order requires the permittees to work towards the goal of restoring and preserving the natural hydrologic cycles in approving urban developments. To accomplish this goal, the permittees are required to implement low impact development principles through appropriate site design and source control BMPs. Recent studies have indicated that low impact development[10] (LID) is one of the most effective ways to minimize any adverse impacts on storm water runoff quality and quantity resulting from urban developments. The Southern California Monitoring Coalition (SMC), including project lead agency, the San Bernardino County Flood Control District, in collaboration with SMC member, Southern California Coastal Water Research Project (SCCWRP) and the California Storm Water Quality Association (CASQA), is developing a Low Impact Development Manual for Southern California with funding from the State Water Resources Control Board. This manual will be

[10] Low impact development is an approach to land development (or re-development) that works with nature to manage storm water as close to its source as possible by using structural and non-structural best management practices to reduce environmental impacts.

incorporated into the CASQA BMP Handbooks. The permittees are encouraged to utilize the manual as a resource for proper LID design and implementation techniques. In order to avoid becoming a source of nuisance, a source of mobilization for existing subterranean contaminants and/or a source of habitat for vectors, LID infiltration BMPs must be properly designed and subsequently maintained.

The proposed order also includes a requirement to infiltrate, harvest and re-use, evapotranpirate or capture the volume of runoff produced from a 24-hour, 85th percentile storm event (design capture volume) for new and re-development projects. It also recognizes that certain soil and groundwater conditions, as well as other site conditions might preclude a particular site from achieving onsite retention and/or treatment of the design capture volume and includes alternatives and in-lieu programs.

Post construction activities conducted at properties that have been developed for commercial or industrial use may substantially increase the risk of post construction pollutants being generated from the developed site. Therefore, the WQMP threshold criteria priority development projects in the proposed order have been redefined from those of third term permit. Third term permit thresholds currently require the development and implementation of post construction WQMP for non-residential commercial/industrial construction projects, where the combined impervious surface area of the project is equal to or greater than 100,000 square feet. WQMP requirement thresholds for residential projects require a WQMP to be prepared when subdivision projects include 10 lots and units or more. Proposed fourth term permit threshold requirements for WQMP development and implementation have become standardized for commercial/industrial, as well as residential construction projects, where the combined impervious surface area of the project is equal to or greater than 10,000 square feet. The aforementioned criteria were redefined in order to adequately address potential pollutant sources, which may exist at properties which undergo development for commercial and industrial uses. Other criteria, which constitute a priority development project have carried over from third term permit to the proposed order.

9. SANITARY SEWER OVERFLOWS, SEPTIC SYSTEM FAILURES AND PORTABLE TOILET DISCHARGES

The third term permit required the permittees to investigate adverse impacts on urban runoff quality from leaking septic systems and portable toilets. The information provided by the permittees indicates that leaking or failing septic systems are not significant problems in Orange County as most areas of the County are sewered. A number of beach closures in Orange County have been due to spills, overflows, and leaks from the sanitary sewer lines. To address these concerns, waste discharge requirements (SSO order) for local sanitary sewer agencies were adopted by the Regional Board. Subsequently, the State Board adopted an SSO order, Water Quality Order No. 2006-0003, to address this problem on a statewide basis. The Regional Board SSO order has since been rescinded. The permittees are required to comply with the statewide SSO order.

10. MONITORING REQUIREMENTS

During the first term permit and part of the second term permit, the permittees conducted extensive monitoring of the storm water flows, receiving water quality and sediment quality. These early programs focused on identifying pollutants, estimating pollutant loads, tracking compliance with water quality objectives, and identifying sources of pollutants. The Orange County monitoring program, like other monitoring programs nationwide, has established that there is a high degree of uncertainty in the quality of storm water runoff and that there are significant variations in the quality of urban runoff spatially and temporally. However, most of the monitoring programs to date have indicated that there a number of pollutants in urban storm water runoff. Only in a few cases has a definite link between pollutants in urban runoff and beneficial use impairment been established.

In 1999, the permittees re-evaluated their monitoring program and proposed a revised monitoring program. The goals of the 1999 Water Quality Monitoring Program were:

a. To determine the role of urban runoff in beneficial use impairment;

b. To collect technical information to develop an effective urban storm water management plan; and

c. To determine the effectiveness of a number of BMPs, also as an aid to the overall urban storm water management plan.

To accomplish these goals, the monitoring program focused on three areas:

a. Areas where constituent concentrations are substantially above system-wide averages. These areas were referred to as "warm spots" and the designation is based on monitoring data from prior years.

b. Areas of Critical Aquatic Resources (sites with important aquatic resources).

c. Sub-watersheds where certain BMPs have been installed to study their effectiveness.

Based on the results of this monitoring program and the requirements specified in the third term permit and based on guidance provided in "The Model Monitoring Program for Southern California"[11] , a revised monitoring program was submitted (2003 Monitoring Program).

The permittees also participate in a number of other regional monitoring programs such as those conducted by the Southern California Coastal Water Research Project and the California Regional Marine Monitoring Program.

The permittees are encouraged to continue their participation in regional and watershed-wide monitoring programs. By July 1, 2003, the permittees were required to re-evaluate their Water Quality Monitoring Program and submit a revised plan for approval. In February 2003, a revised plan was developed and final approval was given by the Executive Officer in July 2005. The revised plan includes the following monitoring elements: Mass Emissions, Estuary/Wetlands, Water Column Toxicity, Bacteriological/Pathogen, Bioassessment, Reconnaissance, Land Use Correlation, and TMDL/303(d) Listed Waterbodies.

[11] The Model Monitoring Program for Municipal

X. WATER QUALITY BENEFITS/COST ANALYSIS/FISCAL ANALYSIS

There are direct and indirect benefits from clean beaches, clean water, and a clean environment. It is difficult to assign a dollar value to the benefits the public derives from fishable and swimmable waters. In 1972, at the start of the NPDES program, only 1/3 of the US waters were swimmable and fishable. In 2001, 2/3 of the US waters meets these criteria. In the 2008, *Money* magazine survey of the "Best Places to Live", clean water and air ranked as the most important factors in choosing a place to live. Thus, environmental quality has a definite link to property values. Clean beaches and other water recreational facilities also attract tourists. According to the Orange County 2006 Community Indicators Project, it is estimated that on average, an out-of –county visitor spent an average of $107.00 per day in 2004. Huntington Beach's 8.5-mile shoreline attracts 10 million visitors a year[12]. During the summer of 1999 and 2000 when the beaches were closed to water contact recreation, the beach communities reported multi-million-dollar losses in tourist revenues.

The true magnitude of the urban runoff problem is still elusive and any reliable cost estimate for cleaning up urban runoff would be premature. For urban storm water runoff, end-of-pipe treatments are cost prohibitive and are not generally considered as a technologically feasible option. Over the last decade, the permittees have attempted to define the problem and implemented best management practices by implementing regional BMPs to combat the problem. The costs incurred by the permittees in implementing these programs and policies can be divided into three broad categories (the costs indicated below are for the entire Orange County storm water program):

[12] Los Angeles Times, May 9, 2001

1. Shared costs: These are costs that fund activities performed mostly by the principal permittee under the Implementation Agreement. These activities include overall storm water program coordination; intergovernmental agreements; representation at the Storm Water Quality Task Force, Regional Board/State Board meetings and other public forums; preparation and submittal of compliance reports and other reports required under the NPDES permits and Water Code Section 13267, budget and other program documentation; coordination of consultant studies, co-permittee meetings; and training seminars, water quality monitoring, and Countywide pubic education and outreach. Shared costs have increased from $0.81M at the inception of the Orange County Stormwater Program to $4.8M in 2006-7.

2. Individual Costs for DAMP Implementation: These are costs incurred by each permittee for implementing the BMPs (drainage facility inspections for illicit connections, drain inlet/catchbasin stenciling, public education, etc.) included in the DAMP. A number of programs and policies for non-point and storm water pollution controls existed prior to the urban storm water runoff NPDES program. However, the DAMP that was developed and implemented in response to the urban storm water runoff NPDES program required additional programs and policies for pollution control. These costs are attributable to DAMP implementation. In 2006/07, the Permittees determined their total Individual Costs to be $82.2M.

In addition to these expenditures, volunteer efforts (such as the annual "Beach and Innercoastal Watershed Cleanup Day", etc.) also contributed to the urban runoff pollution control efforts.

The permittees identified the following funding sources (2006/07):

FUNDING SOURCE	*PERCENTAGE*
General Funds	11.8%
Gas Taxes	1.3%
Grants	30%
Sanitation Fees	31.3%
Time & Materials Ordinance & Permit Fees	0.6%
Special District Funds	24.3%
Other Sources	0.2%

XI. ANTIDEGRADATION ANALYSIS

The Regional Board has considered whether a complete antidegradation analysis, pursuant to 40 CFR 131.12 and State Board Resolution No. 68-16, is required for these storm water discharges. The Regional Board finds that the pollutant loading rates to the receiving waters will be reduced with the implementation of the requirements in this order. As a result, the quality of storm water discharges and receiving waters will be improved. Since this order will not result in a lowering of water quality, a complete antidegradation analysis is not necessary, consistent with the federal and state antidegradation requirements.

XII. PUBLIC WORKSHOP

The Regional Board recognizes the significance of Orange County's Storm Water/Urban Runoff Management Program and will conduct, participate, and/or assist with any workshop

during the term of this order to promote and discuss the progress of the storm water management program. The details of the workshop will be posted on the Regional Board's website, published in local newspapers and mailed to interested parties. Persons wishing to be included in the mailing list for any of the items related to this order may register their e-mail address and/or mailing address with the Regional Board office at the address given below.

XIII. PUBLIC HEARING

The Regional Board opened a public hearing regarding the proposed waste discharge requirements on Friday, November 21, 2008 at 9:30 a.m. at the City Council Chambers, City of Yorba Linda. The public hearing was continued on Friday, January 18, 2002 at 9:00 a.m. at the City Council Chambers, City of Santa Ana, at which time Order No. R8-2002-0010 was adopted.

XIV. INFORMATION AND COPYING

Persons wishing further information may write to the above address or call Marc Brown at (951) 321-4584. Copies of the application, proposed waste discharge requirements, and other documents (other than those which the Executive Officer maintains as confidential) are available at the Regional Board office for inspection and copying by appointment scheduled between the hours of 8:30 a.m. and 4:00 p.m., Monday through Friday (excluding holidays).

XV. REGISTER OF INTERESTED PERSONS

Any person interested in a particular application or group of applications may leave his/her e-mail and/or mailing address and phone number as part of the file for an application. Copies of tentative waste discharge requirements will be mailed to all interested parties.

In addition to the permittees, comments were solicited from the following agencies and/or persons:

U. S. Environmental Protection Agency – Eugene Bromley (W-5-1)
US Army District, Los Angeles, Corps of Engineers - Permits Section
NOAA, National Marine Fisheries Service
US Fish and Wildlife Service - Carlsbad
State Water Resources Control Board – David Rice, Office of the Chief Counsel
State Water Resources Control Board – Bruce Fujimoto, Division of Water Quality
State Department of Water Resources - Glendale
California Regional Water Quality Control Board, North Coast Region (1) – Executive Officer
California Regional Water Quality Control Board, San Francisco Bay Region (2) – Executive Officer
California Regional Water Quality Control Board, Central Coast Region (3) –Executive Officer
California Regional Water Quality Control Board, Los Angeles Region (4) – Tracy Egoscue
California Regional Water Quality Control Board, Central Valley Region (5S) – Executive Officer
California Regional Water Quality Control Board, Central Valley Region (5R), Redding - AEO
California Regional Water Quality Control Board, Central Valley Region (5F), Fresno – AEO
California Regional Water Quality Control Board, Lahontan Region (6SLT), South Lake Tahoe – Executive Officer
California Regional Water Quality Control Board, Lahontan Region (6V), Victorville – AEO
California Regional Water Quality Control Board, Colorado River Basin Region (7) – Robert Purdue
California Regional Water Quality Control Board, San Diego Region (9) – John Robertus
State Department of Fish and Game - Long Beach
State Department of Health Services - Santa Ana
State Department of Parks and Recreation –
Orange County Health Care Agency – Larry Honeybourne
South Coast Air Quality Management District, Diamond Bar -
Caltrans, District 12, Santa Ana – Grace Pina-Garrett
Southern Pacific Railroad
Atchison, Topeka & Santa Fe Railway Company
Seal Beach Naval Weapons Station
Seal Beach Naval Reserve Center, Los Alamitos
U. S. Marine Corps Air Station, El Toro -
National Forest Service
URS/Greiner - Bob Collacott
The Irvine Company - Sat Tamaribuchi
Building Industry Association – Mark Grey
Latham & Watkins – Paul Singarella
Best, Best, and Krieger –

Southern California Association of Governments, Los Angeles - General Manager

Universities and Colleges (Chancellor)
University of California, Irvine
California State University, Fullerton
Chapman College
Coastline College
Cypress College
Fullerton College
Irvine Valley College
Golden West College
Orange Coast College
Rancho Santiago College

School Districts (Superintendent)
Anaheim Elementary School District
Anaheim Union High School District
Brea-Olinda Unified School District
Buena Park Joint Union High School District
Centralia Elementary School District
Cypress Elementary School District
Fountain Valley Union High School District
Fullerton Elementary School District
Fullerton Joint Union High School District
Garden Grove Unified School District
Huntington Beach Elementary School District
Huntington Beach Union High School District
Irvine Unified Union High School District
La Habra Joint Union High School District
Los Alamitos Unified School District
Lowell Joint Union High School District
Magnolia Elementary School District
Newport-Mesa Unified School District
Ocean View Union High School District
Orange Unified School District
Placentia Unified School District
Santa Ana Unified School District
Savanna Union High School District
Tustin Unified School District
Westminster Union High School District
Yorba Linda Joint Union High School District

Hospitals (Administrator)
Anaheim General Hospital
Brea Community Hospital
Chapman General Hospital, Orange
Children's Hospital of Orange County. Orange
Coastal Communities Hospital, Santa Ana
Fairview Hospital

FHP Hospital, Fountain Valley
Fountain Valley Regional Hospital and Medical Center
Hoag Hospital, Newport Beach
Kaiser Foundation Hospital, Anaheim
Orange County Community Hospital, Buena Park
Pacifica Community Hospital, Huntington Beach
Placentia Linda Community Hospital
Santa Ana Hospital and Medical Center
St. Joseph's Hospital, Orange
U.C. Irvine Medical Center
Vencor Hospital of Orange County, Westminster
Whittier Hospital and Medical Center, Buena Park

Environmental Organizations
Lawyers for Clean Water – Daniel Cooper
Orange County Coastkeeper – Garry Brown
Defend the Bay – Bob Caustin
Sierra Club, Orange County Chapter
Sierra Club, Los Angeles Chapter - General Manager
Natural Resources Defense Council (NRDC) – David Beckman
Cousteau Society
Amigos De Bolsa Chica
Audobon Sea & Sage Chapter
Huntington Beach Wetlands Conservancy
Surfrider Foundation- Nancy Gardner

Newspapers
Orange County Register – Pat Brennan
Los Angeles Times –
Press Enterprise –
Daily Pilot – Paul Clinton

Major Water/Wastewater Agencies
Santa Ana Watershed Project Authority – Celeste Cantu
Irvine Ranch Water District – General Manager
Los Alisos Water District - General Manager
El Toro Water District - General Manager
San Bernardino County Flood Control District - Naresh Varma
Riverside County Flood Control & Water Conservation District – Steve Stump/Mark Wills
L.A. County Department of Public Works - Gary Hildebrand
Orange County Sanitation Districts - Robert Ghirelli
Orange County Water District – General Manager
Metropolitan Water District - Ed Mean

TAB "3"

California Regional Water Quality Control Board
Santa Ana Region

ORDER NO. R8-2002-0010
NPDES No. CAS618030

Waste Discharge Requirements
for
the County of Orange, Orange County Flood Control District
and
The Incorporated Cities of Orange County Within the Santa Ana Region
Areawide Urban Storm Water Runoff
Orange County

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter Regional Board) finds that:

1. The 1987 amendments to the Clean Water Act (CWA) added Section 402(p) establishing a framework for regulating municipal and industrial (including construction) storm water discharges under the National Pollutant Discharge Elimination System (NPDES). Section 402(p) of the CWA requires NPDES permits for storm water discharges from municipal separate storm sewer systems (MS4) as well as other designated storm water discharges that are considered significant contributors of pollutants to waters of the United States. On November 16, 1990, the United States Environmental Protection Agency (hereinafter EPA) amended its NPDES permit regulations (40 CFR Parts 122, 123 and 124) to describe permit application requirements for storm water discharges.

2. Prior to EPA's promulgation of the storm water permit regulations, the three counties (Orange, Riverside, and San Bernardino) and the incorporated cities within the jurisdiction of the Santa Ana Regional Board requested areawide NPDES permits for urban storm water runoff. On July 13, 1990, the Regional Board adopted Order No. 90-71 for urban storm water runoff from urban areas in Orange County within the Santa Ana Region. The County of Orange was named as the principal permittee and the Orange County Flood Control District (OCFCD) and the incorporated cities were named as the co-permittees. Order No. 96-31, issued by the Regional Board on March 8, 1996, renewed the permit for another five years.

3. Order No. 96-31 expired on March 1, 2001. On September 1, 2000, the County of Orange Public Facilities and Resources Department (OCPFRD) and the Orange County Flood Control District (OCFCD) in cooperation with the cities of Anaheim, Brea, Buena Park, Costa Mesa, Cypress, Fountain Valley, Fullerton, Garden Grove, Huntington Beach, Irvine, Laguna Woods, La Habra, La Palma, Lake Forest, Los Alamitos, Newport Beach, Orange, Placentia, Santa Ana, Seal Beach, Stanton, Tustin, Villa Park, Westminster, and Yorba Linda (hereinafter collectively referred to as permittees or dischargers), submitted NPDES Application No. CAS618030 and a Report of Waste Discharge for reissuance of their areawide storm water permit. In order to more effectively carry out the requirements of this order, the permittees have agreed that the County of Orange will continue as principal permittee and the OCFCD and the incorporated cities will continue as co-permittees. On March 5, 2001, Order No. 96-31, NPDES No. CAS618030, was

administratively extended in accordance with Title 23, Division 3, Chapter 9, §2235.4 of the California Code of Regulations.

4. The permittees serve a population of approximately 2.8 million, occupying an area of approximately 786 square miles (including unincorporated areas and the limits of 33 cities, 25 of which are within the jurisdiction of this Regional Board; two of the cities, Laguna Woods and Lake Forest, are within both the San Diego and Santa Ana Regional Boards' jurisdictions). The permitted area is shown on Attachment A. The permittees have jurisdiction over and /or maintenance responsibility for storm water conveyance systems within Orange County. The County's systems include an estimated 400 miles of storm drain systems. A major portion of the urbanized areas of Orange County drains into waterbodies within this Regional Board's jurisdiction. In certain cases, where a natural streambed is modified to convey storm water flows, the conveyance system becomes both an MS4 and a receiving water. The major storm drain systems and drainage areas in Orange County, which are within this Region, are shown on Attachment B. A portion of the Orange County drainage area is within the jurisdiction of the San Diego Regional Board and is regulated under an order issued by that Board.

5. Storm water outfalls from the MS4 systems in Orange County enter, or are tributary to, various water bodies of the Region. The permitted area can be subdivided into five tributary watersheds: the San Gabriel River drainage area, the Huntington Harbour and Bolsa Bay drainage area, the Santa Ana River drainage area, the Newport Bay drainage area, and the Irvine and Newport Coast Areas of Special Biological Significance (see Attachment B). These watersheds are tributary to the Pacific Ocean. The surface water bodies in Orange County include:

   Inland Surface Streams

   a. Santa Ana River, Reaches 1 and 2,
   b. Silverado Creek (tributary to Santiago Creek),
   c. Santiago Creek, Reaches 1, 2, 3, and 4 (tributary to the Santa Ana River),
   d. San Diego Creek, Reaches 1 and 2 (tributary to Newport Bay),
   e. San Joaquin Freshwater Marsh (tributary to San Diego Creek),
   f. All other tributaries to these Creeks: Bonita Creek, Serrano Creek, Peters Canyon Wash, Hicks Canyon Wash, Bee Canyon Wash, Borrego Canyon Wash, Agua Chinon Wash, Laguna Canyon Wash, Rattlesnake Canyon Wash, Sand Canyon Wash, Black Star Creek, Carbon Canyon Creek, Coyote Creek and other tributaries.

   Bays, Estuaries, and Tidal Prisms

   a. Anaheim Bay,
   b. Sunset Bay,
   c. Bolsa Bay and Bolsa Chica Ecological Reserve,
   d. Lower and Upper Newport Bay,
   e. Tidal Prism of Santa Ana River (to within 1000 feet of Victoria Street) and Newport Slough, Santa Ana Salt Marsh,

f. Tidal Prism of San Gabriel River (River Mouth to Marina Drive),

g. Tidal Prisms of Flood Control Channels Discharging to Coastal or Bay Waters (e.g. Huntington Harbour).

Ocean Waters

Nearshore Zone

a. San Gabriel River to Poppy Street in Corona Del Mar,

b. Poppy Street to Southeast Regional Boundary.

Offshore Zone

a. Waters between Nearshore Zone and Limit of State Waters.

Lakes and Reservoirs

a. Anaheim Lakes,

b. Irvine Lake (Santiago Reservoir),

c. Laguna, Peters Canyon, and Rattlesnake Reservoirs.

The beneficial uses of these water bodies include: municipal and domestic supply, agricultural supply, industrial service and process supply, groundwater recharge, navigation, hydropower generation, water contact recreation, non-contact water recreation, commercial and sportfishing, warm freshwater and limited warm freshwater habitats, cold freshwater habitat, preservation of biological habitats of special significance, wildlife habitat, preservation of rare, threatened or endangered species, marine habitat, shellfish harvesting, spawning, reproduction and development of aquatic habitats, and estuarine habitat . The ultimate goal of this storm water management program is to protect the beneficial uses of the receiving waters.

6. The Santa Ana River Basin is the major watershed within the jurisdiction of the Regional Board. The lower Santa Ana River Basin (downstream from Prado Basin) includes the Orange County drainage areas and the Upper Santa Ana River Basin includes the San Bernardino and the Riverside drainage areas. Generally, the San Bernardino County drainage areas drain to the Riverside County drainage areas, and Riverside County drainage areas discharge to Orange County.

7. Within the Region, runoff from the San Bernardino County areas is generally conveyed to the Riverside County areas through the Santa Ana River or other drainage channels tributary to the Santa Ana River. These flows are then discharged to Reach 2 of the Santa Ana River through Prado Basin (Reach 3 of the Santa Ana River). Most of the flow in Reach 2 is recharged in Orange County. During wet weather, some of the flow is discharged to the Pacific Ocean through Reach 1 of the Santa Ana River.

8. The three county areas within this Region are regulated under three areawide permits for urban storm water runoff. These areawide NPDES permits are:

a. Orange County, NPDES No. CAS618030;

b. Riverside County, NPDES No. CAS618033; and,

c. San Bernardino County, NPDES No. CAS618036.

For an effective watershed management program, cooperation and coordination among the regulators, the municipal permittees, the public, and other entities are essential.

9. Studies conducted by the EPA, the states, flood control districts and other entities indicate the following major sources for urban storm water pollution nationwide:

   a. Industrial sites where appropriate pollution control and best management practices (BMPs)[1] are not implemented;

   b. Construction sites where erosion and siltation controls and BMPs are not implemented; and,

   c. Urban runoff where the drainage area is not properly managed.

10. A number of permits were adopted to address pollution from the sources identified in Finding 9, above. The State Board issued two statewide general NPDES permits: one for storm water runoff from industrial activities (NPDES No. CAS000001, General Industrial Activities Storm Water Permit) and a second one for storm water runoff from construction activities (NPDES No. CAS000002, General Construction Activity Storm Water Permit). Industrial activities (as identified in 40 CFR 122.26(b)(14)) and construction sites of five acres or more, are required to obtain coverage under these statewide general permits. The permittees have developed project conditions of approval requiring coverage under the State's General Permit for new developments to be implemented at the time of grading or building permit issuance for construction sites on five acres or more and at the time of local permit issuance for industrial facilities. The State Board also adopted Order No. 99-06-DWQ, NPDES No. CAS000003, for storm water runoff from facilities (including freeways and highways) owned and/or operated by Caltrans. The Regional Board adopted Order 99-11, NPDES No. CAG018001, for concentrated animal feeding operations, including dairies. The Regional Board also issues individual storm water permits for certain industrial facilities within the Region. Currently there are 22 individual storm water NPDES permits; 8 of these facilities are located in the Orange County area. Additionally, for a number of facilities that discharge process wastewater and storm water, storm water discharge requirements are included with the facilities' NPDES permit for process wastewater.

11. In most cases, the industries and construction sites covered under the Statewide General Industrial and Construction Permits discharge into storm drains and/or flood control facilities owned and operated by the permittees. These industries and construction sites are also regulated under local laws and regulations. A coordinated effort between the permittees and the Regional Board staff is critical to avoid duplicative and overlapping efforts when overseeing the compliance of dischargers covered under the Statewide General Permits. As part of this coordination, the permittees have been notifying Regional Board staff when they observe conditions that pose a threat or potential threat to water quality, or when an industrial facility or

[1] Best Management Practices (BMPs) are water quality management practices that are maximized in efficiency for the control of storm water runoff pollution.

construction activity that has failed to obtain required coverage under the appropriate general storm water permit.

12. The permittees have the authority to approve plans for residential, commercial, and industrial developments. If not properly controlled and managed, urbanization could result in the discharge of pollutants in storm water runoff. Urban area runoff (Finding 9.c) may contain elevated levels of pathogens (bacteria, protozoa, viruses), sediment, trash, fertilizers (nutrients, compounds of nitrogen and phosphorus), pesticides (DDT, Chlordane, Diazinon, Chlorpyrifos), heavy metals (cadmium, chromium, copper, lead, zinc), and petroleum products (oil, grease, petroleum hydrocarbons, polycyclic aromatic hydrocarbons). Storm water can carry these pollutants to rivers, streams, lakes, bays and the ocean (receiving waters).

13. Pollutants in urban runoff can impact the beneficial uses of the receiving waters and can cause or threaten to cause a condition of pollution or nuisance. Pathogens (from sanitary sewer overflows, septic system leaks, spills and leaks from portable toilets, pets, wildlife and human activities) can impact water contact recreation, non-contact water recreation and shellfish harvesting. Microbial contamination of the beaches from urban runoff and other sources has resulted in a number of health advisories issued by the Orange County Health Officer. Floatables (from trash) are an aesthetic nuisance and can be a substrate for algae and insect vectors. Oil and grease can coat birds and aquatic organisms, adversely affecting respiration and/or thermoregulation. Other petroleum hydrocarbon components can cause toxicity to aquatic organisms and can impact human health. Suspended and settleable solids (from sediment, trash, and industrial activities) can be deleterious to benthic organisms and may cause anaerobic conditions to form. Sediments and other suspended particulates can cause turbidity, clog fish gills and interfere with respiration in aquatic fauna. They can also screen out light, hindering photosynthesis and normal aquatic plant growth and development. Toxic substances (from pesticides, herbicides, petroleum products, metals, industrial wastes) can cause acute and/or chronic toxicity, and can bioaccumulate in organisms to levels that may be harmful to human health. Nutrients (from fertilizers, confined animal facilities, pets, birds) can cause excessive algal blooms. These blooms can lead to problems with taste, odor, color and increased turbidity, and can depress the dissolved oxygen content, leading to fish kills.

14. A major portion of Orange County is urbanized with residential, commercial and industrial developments. Urban development increases impervious surfaces and storm water runoff volume and velocity and decreases vegetated, pervious surface available for infiltration of storm water. Increase in runoff volume and velocity can cause scour, erosion (sheet, rill and/or gully), aggradation (raising of a streambed from sediment deposition) and can change fluvial geomorphology, hydrology and aquatic ecosystems. The local agencies (the permittees) are the owners and operators of the MS4 systems and have established appropriate legal authority to control some but not all discharges to these systems (see Finding 16). The permittees have established appropriate legal authority to control discharges into the MS4 systems. They adopted grading and/or erosion control ordinances, guidelines and best management practices (BMPs) for municipal, commercial, and industrial activities, and a drainage area management plan (DAMP). The permittees must exercise a combination of these programs, policies, and legal authority to ensure that pollutant loads resulting from urbanization are properly controlled and managed.

15. This order regulates urban storm water runoff from areas under the jurisdiction of the permittees. Urban storm water runoff includes those discharges from residential, commercial, industrial and construction areas within the permitted area and excludes discharges from feedlots, dairies, and farms (also see Finding 16). Storm water discharges consist of surface runoff generated from various land uses in all the hydrologic drainage areas that discharge into the water bodies of the U.S. The quality of these discharges varies considerably and is affected by land use activities, basin hydrology and geology, season, the frequency and duration of storm events, and the presence of illicit[2] disposal practices and illegal connections.

16. The permittees may lack legal jurisdiction over storm water discharges into their systems from some State and Federal facilities, utilities and special districts, Native American tribal lands, waste water management agencies and other point and non-point source discharges otherwise permitted by the Regional Board. The Regional Board recognizes that the permittees should not be held responsible for such facilities and/or discharges. Similarly, certain activities that generate pollutants present in storm water runoff may be beyond the ability of the permittees to eliminate. Examples of these include operation of internal combustion engines, atmospheric deposition, brake pad wear, tire wear and leaching of naturally occurring minerals from local geography.

17. This order is intended to regulate the discharge of pollutants in urban storm water runoff from anthropogenic (generated from human activities) sources within the jurisdiction and control of the permittees and is not intended to address background or naturally occurring pollutants or flows.

18. Water quality assessments conducted by Regional Board staff have identified a number of beneficial use impairments due, in part, to urban runoff. Section 303(b) of the CWA requires each of the regional boards to routinely monitor and assess the quality of waters of the region. If this assessment indicates that beneficial uses and/or water quality objectives are not met, then that waterbody must be listed under Section 303(d) of the CWA as an impaired waterbody. The 1998 water quality assessment listed a number of water bodies within the Region under Section 303(d) as impaired waterbodies. In the Orange County area, these include: (1) San Diego Creek, Reach 1 (listed for sedimentation/siltation, metals, nutrients, pesticides); (2) San Diego Creek, Reach 2 (listed for sedimentation/siltation, nutrients, metals, unknown toxicity); (3) Upper Newport Bay Ecological Reserve (listed for sedimentation/siltation, metals, nutrients, pathogens, pesticides); (4) Lower Newport Bay (listed for metals, pesticides, pathogens, nutrients, priority organics); (5) Anaheim Bay (listed for metals, pesticides); 6) Huntington Harbour (listed for metals, pesticides, pathogens); 7) Santiago Creek, Reach 4 (listed for salinity, TDS, chlorides); and 8) Silverado Creek (listed for pathogens, salinity, TDS, chlorides). For some of these impaired waterbodies, one of the listed causes of impairment is urban runoff.

19. Federal regulations require that a total maximum daily load (TMDL) be established for each 303(d) listed waterbody for each of the pollutants causing impairment. The TMDL is the total amount of the problem pollutant that can be discharged while water quality standards in the receiving water are attained, i.e., water quality objectives are met and the beneficial uses are protected. It is the sum of the individual wasteload allocations (WLA) for point source inputs,

[2] Illicit Disposal means any disposal, either intentionally or unintentionally, of material or waste that can pollute storm water or create a nuisance.

load allocations (LA) for non-point source inputs and natural background, with a margin of safety. The TMDLs are the basis for limitations established in waste discharge requirements. TMDLs have been developed for sediment and nutrients for San Diego Creek and Newport Bay. A fecal coliform TMDL for Newport Bay has also been established The WLAs from these TMDLs are included in this order. Dischargers to these water bodies are currently implementing these TMDLs. This order specifies the WLAs and includes requirements for the implementation of these WLAs.

20. The MS4s generally contain non-storm water flows such as irrigation runoff, runoff from non-commercial car washes, runoff from miscellaneous washing and cleaning operations, and other nuisance flows. Discharges of non-storm water containing pollutants into the MS4 systems and to waters of the U.S. are prohibited unless they are regulated under a separate NPDES permit, or are exempt, as indicated in Discharge Prohibitions, Section III.3 of this order.

21. Order No. 90-71 (first term permit) required the permittees to: (1) develop and implement the DAMP and a storm water and receiving water monitoring plan; (2) eliminate illegal[3] and illicit discharges[4] to the MS4s; and (3) enact the necessary legal authority to effectively prohibit such discharges. The overall goal of these requirements was to reduce pollutant loadings to surface waters from urban runoff to the maximum extent practicable (MEP)[5]. Order No. 96-31 (second term permit) required continued implementation of the DAMP and the monitoring plan, and required the permittees to focus on those areas that threaten beneficial uses.

22. This order (Order No. R8-2002-0010, third term permit) outlines additional steps for an effective storm water management program and specifies requirements to protect the beneficial uses of all receiving waters. This order requires the permittees to examine sources of pollutants in storm water runoff from activities which the permittees conduct, approve, regulate and/or authorize by issuing a license or permit.

23. The Report of Waste Discharge (the permit renewal application) included the following major documents:

    a. A summary of status of current Storm Water Management Program;

    b. A Proposed Plan of Storm Water Quality Management Activities for 2001-2006, as outlined in the Updated DAMP. The 2000 DAMP includes all the activities the permittees propose to undertake during the next permit term, goals and objectives of such activities, an evaluation of the need for additional source control and/or structural and non-structural BMPs and proposed pilot studies;

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[3] Illegal discharge means any discharge (or seepage) to the municipal separate storm sewer that is not composed entirely of storm water except for the authorized discharges listed in Section III of this permit. Illegal discharges include the improper disposal of wastes into the storm sewer system.

[4] Illicit Discharge means any discharge to the storm drain system that is prohibited under local, state, or federal statutes, ordinances, codes, or regulations. The term illicit discharge includes all non storm-water discharges except discharges pursuant to an NPDES permit, discharges that are identified in Section III, Discharge Limitations/Prohibitions, of this order, and discharges authorized by the Regional Board Exectutive Officer.

[5] Maximum Extent Practicable (MEP) means to the maximum extent feasible, taking into account considerations of synergistic, additive, and competing factors, including but not limited to, gravity of the problem, technical feasibility,fiscal feasibility, public health risks, societal concerns, and social benefits.

c. A Performance Commitment that includes new and existing program elements and compliance schedules necessary to implement controls that reduce pollutants to the maximum extent practicable;

d. A summary of procedures implemented to detect illegal discharges and illicit disposal practices;

e. A summary of enforcement procedures and actions taken to require storm water discharges to comply with the approved storm water management programs;

f. A summary of public agency activity, results of monitoring program, and program effectiveness; and,

g. A fiscal analysis.

24. The permittees own and/or operate facilities where industrial or related activities take place that may have an impact on storm water quality. Some of the permittees also enter into contracts with outside parties to carry out municipal related activities that may also have an impact on storm water quality. These facilities and related activities include, but are not limited to, street sweeping, catch basin cleaning, maintenance yards, vehicle and equipment maintenance areas, waste transfer stations, corporation and storage yards, parks and recreational facilities, landscape and swimming pool maintenance activities, storm drain system maintenance activities and the application of herbicides, algaecides and pesticides. The permittees have prepared and implemented an environmental performance report for appropriate fixed public facilities under their jurisdiction, and identified best management practices for those activities found to require pollution prevention measures. Non-storm water discharges from these facilities and/or activities could also affect water quality. This order prohibits non-storm water discharges from public facilities, unless the discharges are exempt under Section III, Discharge Limitations, 3 & 5 of this order, or are permitted by the Regional Board under an individual NPDES permit. The second term permit required the permittees to prepare an Environmental Performance Reporting Program to identify significant issues and to implement corrective actions at municipal facilities and activities. Most of this work has been completed. However, this is a continuing process and this order requires the permittees to continue this process at least on an annual basis.

25. Successful implementation of the provisions and limitations in this order will require the cooperation of all the public agency organizations within Orange County having programs/activities that have an impact on storm water quality. A list of these organizations is included in Attachment C. As such, these organizations are expected to actively participate in implementing the Orange County NPDES Storm Water Program. The Regional Board has the discretion and authority to require non-cooperating entities to participate in this areawide permit or obtain individual storm water discharge permits, pursuant to 40 CFR 122.26(a). The permittees have developed a Storm Water Implementation Agreement among the County, the cities and the Orange County Flood Control District. The Implementation Agreement establishes the responsibilities of each party and a funding mechanism for the shared costs, and recognizes the Technical Advisory Committee (TAC).

26. The major focus of storm water pollution prevention is the development and implementation of an appropriate DAMP, including best management practices (BMPs). The ultimate goal of the urban storm water management program is to support attainment of water quality objectives for

the receiving waters and to protect beneficial uses through the implementation of the DAMP. The permittees developed and submitted a DAMP.

27. The DAMP is a dynamic document and the permittees have implemented, or are in the process of implementing, the various elements of the DAMP. A revised DAMP was included with the NPDES permit renewal application. This order requires the permittees to continue to implement the BMPs listed in the revised DAMP; update or modify the DAMP, when appropriate, consistent with the MEP and other applicable standards; and to effectively prohibit illegal and illicit discharges to the storm drain system.

28. Urban runoff contains pollutants from privately owned and operated facilities, such as residences, businesses, private and/or public institutions, and commercial establishments. Therefore, a successful storm water management plan should include the participation and cooperation of the public, businesses, the permittees and the regulators. The DAMP has a strong emphasis on public education.

29. The Orange County DAMP defined: (1) a management structure for the permittees' compliance effort; (2) a formal agreement to underpin cooperation; and (3) a detailed municipal effort to develop, implement, and evaluate various BMPs or control programs in the areas of public agency activities, public information, new development and construction, public works construction, industrial discharger identification, and illicit discharger/connection identification and elimination.

30. In order to characterize storm water discharges, to identify problem areas, to determine the impact of urban runoff on receiving waters, and to determine the effectiveness of the various BMPs, an effective monitoring program is critical. The principal permittee administers the monitoring program for the permittees. This program included storm water monitoring, receiving water monitoring, dry weather monitoring and sediment monitoring. The monitoring data indicate some spatial differences in water quality among Orange County's major watersheds. Based on these monitoring data, the monitoring program was revised in 1998 to focus on "warm spots" (areas where the pollutant concentrations were above the average for the watershed) and "special value" areas (critical aquatic resources). Another element of the monitoring program is the Reconnaissance and Source Identification component that targets areas that are known to exhibit unusually high levels of storm water pollutants. The 1998 monitoring program was approved and the data collection under this program will be completed by July 1, 2003. By January 1, 2003, the State Board is required by SB 72 (Water Code Section 13383.5) to develop a statewide municipal strom water monitoring program. By July 1, 2003, the permittees are required to develop a revised monitoring program as specified in the monitoring and reporting program and consistent with any new requirements developed by the State Board.

31. In accordance with the Strategic Plan and Initiatives for the State and Regional Boards (June 22, 1995), the Regional Board recognizes the importance of an integrated watershed management approach. The Regional Board also recognizes that a watershed management program should integrate all related programs, including the storm water program and TMDL processes. Consistent with this approach, some of the municipal storm water monitoring programs have already been integrated into regional monitoring programs.

32. Illegal discharges to the storm drains can contribute to storm water and other surface water contamination. A reconnaissance survey of the municipal storm drain systems (open channels and underground storm drains) was completed by the permittees. The permittees also developed a program to prohibit illegal/illicit discharges to their storm drains and flood control facilities. Continued surveillance and enforcement of these programs are required to eliminate illicit discharges. The permittees have a number of mechanisms in place to eliminate illicit discharges to the MS4s, including construction, commercial, and industrial facility inspections, drainage facility inspections, water quality monitoring programs, and public education. The permittees also established a 24-hour water pollution problem reporting hotline. In February 1997, the permittees certified that they had completed a reconnaissance survey of the MS4s to detect and eliminate any illegal connections (undocumented or unpermitted connections to the MS4s). A reconnaissance survey is now being conducted as a part of the routine inspections of all MS4s.

33. The permittees have the authority to control pollutants in storm water discharges, to prohibit illegal connections and illicit discharges, to control spills, and to require compliance and carry out inspections of the storm drain systems within their jurisdictions. The permittees have various forms of legal authority in place, such as charters, State Code provisions for General Law cities, city ordinances, and applicable portions of municipal codes and the State Water Code, to regulate storm water/urban runoff discharges. In order to insure countywide consistency and to provide a legal underpinning to the entire Orange County storm water program, a model water quality ordinance was completed on August 15, 1994 and was adopted by all the permittees. The permittees are required by this order to review their existing enforcement authority to determine whether any additional legal authority is needed in order for permittees to administer civil and/or criminal penalties in enforcement actions for violations of the Water Quality Ordinance.

34. Pollution prevention techniques, appropriate planning processes and early identification of potential storm water impacts and mitigation measures can significantly reduce storm water pollution problems. The permittees should consider these impacts and appropriate mitigation measures in the planning procedures and in the California Environmental Quality Act (CEQA) review process for specific projects, Master Plans, etc. The permittees already require a Water Quality Management Plan, which addresses permanent post-construction BMPs, in addition to the SWPPP, which is required by the statewide general permit for construction activity. The permittees are encouraged to propose and participate in watershed wide and/or regional water quality management programs.

35. The permittees have developed inter-departmental training programs and have made commitments to conduct a certain number of these training programs during the term of this permit.

36. In accordance with the Clean Water Act and its implementing regulations, this order requires the permittees to develop and implement programs and policies necessary to reduce the discharge of pollutants in urban runoff to waters of the U. S. to the maximum extent practicable (MEP).

37. The legislative history and the preamble to the federal storm water regulations indicate that the Congress and the U.S. EPA were aware of the difficulties in regulating urban storm water runoff solely through traditional end-of-pipe treatment. However, it is the Regional Board's intent that this order require the implementation of best management practices to reduce to the maximum extent practicable, the discharge of pollutants in storm water from the MS4s in order to support attainment of water quality standards. This order, therefore, includes Receiving Water Limitations[6] based upon water quality objectives, prohibits the creation of nuisance and requires the reduction of water quality impairment in receiving waters. In accordance with Section 402 (p) of the Clean Water Act, this order requires the permittees to implement control measures, in accordance with the DAMP, that will reduce pollutants in storm water discharges to the maximum extent practicable. The Receiving Water Limitations similarly require the implementation of control measures to protect beneficial uses and attain water quality objectives of the receiving waters.

38. The Regional Board finds that the unique aspects of the regulation of storm water discharges through municipal storm sewer systems, including the intermittent nature of discharges, difficulties in monitoring and limited physical control over the discharge, will require adequate time to implement and evaluate the effectiveness of BMPs. Therefore, the order includes a procedure for determining whether storm water discharges are causing exceedances of receiving water limitations and for evaluating whether the DAMP must be revised in order to comply with this aspect of the order. The order establishes an iterative process to maintain compliance with the receiving water limitations.

39. The permittees are required to conduct inspections of construction sites, industrial facilities and commercial establishments. To avoid duplicative efforts, the permittees need not inspect facilities that have been inspected by Regional Board staff, if the inspection was conducted during the specified time period. Regional Board staff inspection data will be posted regularly on its internet site. It is anticipated that many of the inspections required under this order can and will be carried out by inspectors currently conducting inspections for the permittees (i.e., grading, building, code enforcement, etc.), during their normal duties.

40. A revised Water Quality Control Plan (Basin Plan) was adopted by the Regional Board and became effective on January 24, 1995. The Basin Plan contains water quality objectives and beneficial uses for water bodies in the Santa Ana Region. The Basin Plan also incorporates by reference all State Board water quality control plans and policies, including the 1990 Water Quality Control Plan for Ocean Waters of California (Ocean Plan) and the 1974 Water Quality Control Policy for Enclosed Bays and Estuaries of California (Enclosed Bays and Estuaries Plan).

41. The requirements contained in this order are necessary to implement the plans and policies described in Finding 40, above. These plans and policies contain numeric and narrative water quality standards for the water bodies in this Region. This order requires permittees to comply with load allocations for constituents with established load allocations for urban runoff, by implementing the necessary BMPs. Continuation of water quality/biota monitoring and analysis

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[6] Receiving Water Limitations are requirements included in the Orders issued by the Board to assure that the regulated discharge does not violate water quality standards established in the Basin Plan at the point of discharge to waters of the State.

of the data are essential to better understand the impacts of storm water discharges on the water quality of the receiving water. The existing Basin Plan, or any further changes to the Basin Plan, may be grounds for the permittees to revise some or all of the DAMP and/or the ROWD.

42. Permittees will be required to comply with any applicable future water quality standards or discharge requirements that may be imposed by the EPA or State of California prior to the expiration of this order. This order may be reopened to include TMDLs and/or other requirements developed and adopted by the Regional Board.

43. The permittees may petition the Regional Board to issue a separate NPDES permit to any discharger of non-storm water into storm drain systems that they own or operate.

44. The permittees under the aegis of the TAC, and in collaboration with the City and County Attorneys, Orange County Sanitation District, the Orange County Building Industry Association, the Food Sanitation Advisory Council, and Western States Petroleum Association, developed an Enforcement Consistency Guide and a Water Quality Ordinance. All of the permittees adopted the Enforcement Consistency Guide and the Water Quality Ordinance. These documents establish legal authority for enforcing storm water ordinances and countywide uniformity in the enforcement actions.

45. It is important to control litter to eliminate trash and other materials in storm water runoff. In addition to the municipal ordinances prohibiting litter, the permittees participate or organize a number of other programs such as "Coastal Cleanup Day", "Pride Days", "Volunteer Connection Day", etc. The permittees also organize solid waste collection programs, household hazardous waste collections, and recycling programs to reduce litter and illegal discharges. Additionally, the permittees have installed debris booms at a number of locations.

46. The permittees are required to continue their drainage system inspection and maintenance program.

47. At a number of locations along the Orange County coast, elevated bacterial levels were detected during the summer of 1999 and 2000. One of the studies conducted to determine the source of bacterial contamination indicated that there is only a minor contribution to the bacterial problems from urban runoff. The permittees currently divert dry weather low flows from some of these areas to sanitary sewer systems on a temporary basis to address this bacterial problem. A number of studies have been initiated to determine the source of this microbial contamination and to develop permanent remedial measures. This order requires the permittees to further investigate and address the coastal bacterial problems.

48. The sampling data indicate the presence of elevated levels of pesticides in storm water runoff from urban areas. The permittees have developed and implemented a model plan entitled, "Management Guidelines for Use of Fertilizers and Pesticides". The permittees are required to review this plan to determine its effectiveness and to make any needed changes. TMDLs are being developed for some of these pesticides for the Newport Bay watershed.

49. Public education is an important part of storm water pollution prevention. The permittees have employed a variety of means to educate the public, business and commercial establishments, industrial facilities and construction sites, and in 1999 developed a long term public education strategy. The permittees are required to continue their efforts in public education programs.

50. The permittees established a taskforce consisting of the principal permittee, Building Industry Association, Association of General Contractors and Civil Engineers and Land Surveyors of California and developed "Best Management Practices for New Development Including Non-Residential Construction Projects (1-5 acres)". The permittees are implementing the BMPs from this guidance document and are requiring new developments and significant redevelopments to develop and implement appropriate Water Quality Management Plans. This order requires structural and non-structural BMPs for new developments and significant redevelopments, only if adequate regional and/or watershed wide management programs are not being implemented.

51. The Regional Board and the permittees recognize the importance of watershed management initiatives and regional planning and coordination in the development and implementation of programs and policies related to water quality protection. A number of such efforts are underway in which the permittees are active participants. This order encourages continued participation in such programs and policies. The Regional Board also recognizes that, in certain cases, diversion of funds targeted for certain monitoring programs to regional monitoring programs may be necessary. The Executive Officer is authorized to approve, after proper public notification and consideration of all comments received, the watershed management initiatives and regional planning and coordination programs and regional monitoring programs. The permittees are required to submit all documents, where appropriate, in an electronic format. All such documents will be posted at the Regional Board's website and all interested parties will be notified. In addition, the website will include the administrative and civil procedures for appealing any decision made by the Executive Officer.

52. The storm water regulations require public participation in the development and implementation of the storm water management program. As such, the permittees are required to solicit and consider all comments received from the public and submit copies of the comments to the Executive Officer of the Regional Board with the annual reports due on November 15. In response to public comments, the permittees may modify reports, plans, or schedules prior to submittal to the Executive Officer.

53. In accordance with California Water Code Section 13389, the issuance of waste discharge requirements for this discharge is exempt from those provisions of the California Environmental Quality Act contained in Chapter 3 (commencing with Section 21100), Division 13 of the Public Resources Code.

54. The permitted discharge is consistent with the anti-degradation provisions of 40 CFR 131.12 and the State Board Resolution 68-16. This order requires implementation of programs (i.e., BMPs) to reduce the level of pollutants in the storm water discharges. The combination of programs and policies required to be implemented under this order for new and existing developmens are designed to improve urban storm water quality.

55. The Regional Board has notified the permittees and interested parties of its intent to issue waste discharge requirements for this discharge and has provided them with an opportunity to submit their written views and recommendations.

56. The Regional Board, in a public hearing, heard and considered all comments pertaining to the discharge and to the tentative requirements.

IT IS HEREBY ORDERED that the permittees, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Clean Water Act, as amended, and regulations and guidelines adopted thereunder, shall comply with the following:

I. RESPONSIBILITIES OF PRINCIPAL PERMITTEE

The principal permittee shall be responsible for the overall program management and shall:

1. Conduct chemical and biological water quality monitoring, as required by the Executive Officer of the Regional Board.
2. Conduct inspections and maintain the storm drain systems within its jurisdiction.
3. Review and revise, if necessary, policies/ordinances necessary to establish legal authority as required by the Federal Storm Water Regulations.
4. Respond and/or arrange for responding to emergency situations, such as accidental spills, leaks, illicit discharges and illegal connections, etc., to prevent or reduce the discharge of pollutants to storm drain systems and waters of the U.S. within its jurisdiction.
5. Take appropriate enforcement actions for illicit discharges to the MS4 systems owned or controlled by the principal permittee.
6. Prepare and submit to the Executive Officer of the Regional Board unified reports, plans, and programs as required by this order, including the annual report.

The activities of the principal permittee shall include, but not be limited to, the following:

1. Coordinate and conduct Management Committee meetings on an as needed basis. The principal permittee will take the lead role in initiating and developing area-wide programs and activities necessary to comply with the NPDES Permit.
2. Coordinate permit activities and participate in any subcommittees formed as necessary to coordinate compliance activities with this order.
3. Provide technical and administrative support and inform the co-permittees of the progress of other pertinent municipal programs, pilot projects, research studies, etc.
4. Coordinate the implementation of area-wide storm water quality management activities such as public education, pollution prevention, household hazardous waste collection, etc.
5. Develop and implement mechanisms, performance standards, etc., to promote uniform and consistent implementation of BMPs among the permittees.
6. Pursue enforcement actions as necessary within its jurisdiction to ensure compliance with storm water management programs, ordinances and implementation plans, including physical elimination of undocumented connections and illicit discharges.
7. In conjunction with the other permittees, implement the BMPs listed in the DAMP, and take such other actions as may be necessary to meet the MEP standard.
8. Monitor the implementation of the plans and programs required by this order and determine their effectiveness in protecting beneficial uses.

9. Coordinate all the activities with the Regional Board, including the submittal of all reports, plans, and programs, as required under this order.
10. Obtain public input for any proposed management and implementation plans, where applicable.
11. Cooperate in watershed management programs and regional and/or statewide monitoring programs.

II. RESPONSIBILITIES OF THE CO-PERMITTEES

The co-permittees shall be responsible for the management of storm drain systems within their jurisdictions and shall:

1. Implement management programs, monitoring programs, implementation plans and all BMPs outlined in the DAMP within each respective jurisdiction, and take any other actions as may be necessary to meet the MEP standard.
2. Coordinate among their internal departments and agencies, as appropriate, to facilitate the implementation of this Order and the DAMP.
3. Establish and maintain adequate legal authority, as required by the Federal Storm Water Regulations.
4. Conduct storm drain system inspections and maintenance in accordance with the criteria developed by the principal permittee.
5. Take appropriate enforcement actions for illicit discharges to the MS4 system owned or controlled by the co-permittee.

The co-permittees' activities shall include, but not be limited to, the following:

1. Participate in a Management Committee comprised of the principal permittee and one representative of each co-permittee. The principal permittee will take the lead role in initiating and developing area-wide programs activities necessary to comply with the NPDES Permit. The committee will meet on a regular basis (at least six times per year). Each permittee shall designate one official representative to the Management Committee.
2. Review, approve, implement, and comment on all plans, strategies, management programs, and monitoring programs, as developed by the principal permittee or any permittee subcommittee to comply with this order.
3. Pursue enforcement actions as necessary to ensure compliance with the storm water management programs, ordinances and implementation plans, including physical elimination of undocumented connections and illicit discharges.
4. Conduct and coordinate with the principal permittee any surveys and characterizations needed to identify the pollutant sources and drainage areas.
5. Submit storm drain system maps with periodic revisions, as necessary.

6. Respond to emergency situations, such as accidental spills, leaks, illicit discharges and illegal connections, etc., to prevent or reduce the discharge of pollutants to storm drain systems and waters of the U.S.
7. Prepare and submit all required reports to the principal permittee in a timely manner.

III. DISCHARGE LIMITATIONS/PROHIBITIONS

1. In accordance with the requirements of 40 CFR 122.26(d)(2)(i)(B) and 40 CFR 122.26(d)(2)(i)(F), the permittees shall prohibit illicit/illegal discharges (non-storm water) from entering into the municipal separate storm sewer systems.
2. The discharge of storm water from the MS4s to waters of the United States containing pollutants that have not been reduced to the maximum extent practicable is prohibited.
3. The permittees shall effectively prohibit the discharge of non-storm water into the MS4s, unless such discharges are authorized by a separate NPDES permit or as otherwise specified in this provision. Certain discharges identified below need not be prohibited by the permittees. If, however, any of these discharges are identified by the permittees or the Executive Officer as a significant source of pollutants, coverage under the Regional Board's De Minimus permit may be required.
    a. Discharges composed entirely of storm water,
    b. Potable water line flushing and other potable water sources,
    c. Air conditioning condensate,
    d. Landscape irrigation, lawn garden watering and other irrigation waters,
    e. Passive foundation drains,
    f. Passive footing drains,
    g. Water from crawl space pumps,
    h. Dechlorinated swimming pool discharges,
    i. Non-commercial vehicle washing,
    j. Diverted stream flows,
    k. Rising ground waters and natural springs,
    l. Ground water infiltration as defined in 40 CFR 35.2005 (20) and uncontaminated pumped groundwater,
    m. Flows from riparian habitats and wetlands,
    n. Emergency fire fighting flows (i.e., flows necessary for the protection of life and property) do not require BMPs and need not be prohibited. However, where possible, when not interferring with health and safety issues, BMPs should be considered (also see Section XIX, Provision 4),
    o. Waters not otherwise containing wastes as defined in California Water Code Section 13050 (d), and

p. Other types of discharges identified and recommended by the permittees and approved by the Regional Board.

The Regional Board may add categories of non-storm water discharges that are not significant sources of pollutants or remove categories of non-storm water discharges listed above based upon a finding that the discharges are a significant source of pollutants.

4. For purposes of this order, a discharge may include storm water or other types of discharges, identified in Section III.3.

5. Non-storm water discharges from public agency activities into waters of the U.S. are prohibited unless the non-storm water discharges are permitted by an NPDES permit or are included in Section III.3. If permitting or immediate elimination of the non-storm water discharges is impractical, the permittees shall include in the Environmental Performance Report, a proposed plan to eliminate the non-storm water discharges in a timely manner.

6. The permittees shall reduce the discharge of pollutants, including trash and debris, from the storm water conveyance systems to the maximum extent practicable.

7. Discharges from the MS4s shall be in compliance with the applicable discharge prohibitions contained in Chapter 5 of the Basin Plan.

8. Discharges from the MS4s of storm water or non-storm water, for which a Permittee is responsible, shall not cause or contribute to a condition of nuisance, as that term is defined in Section 13050 of the Water Code.

IV. RECEIVING WATER LIMITATIONS

1. Discharges from the MS4s shall not cause or contribute to exceedances of receiving water quality standards (designated beneficial uses and water quality objectives) for surface waters or groundwaters.

2. The DAMP and its components shall be designed to achieve compliance with receiving water limitations. It is expected that compliance with receiving water limitations will be achieved through an iterative process and the application of increasingly more effective BMPs. The permittees shall comply with Sections III.2 and IV of this order through timely implementation of control measures and other actions to reduce pollutants in urban storm water runoff in accordance with the DAMP and other requirements of this order, including any modifications thereto.

3. If permittees continue to cause or contribute to an exceedance of water quality standards, notwithstanding implementation of the DAMP and other requirements of this order, the permittees shall assure compliance with Sections III.2 and IV of this order by complying with the following procedure:

   a. Upon a determination by either the permittees or the Executive Officer that the discharges from the MS4 systems are causing or contributing to an exceedance of an applicable water quality standard, the permittees shall promptly notify and thereafter submit a report to the Executive Officer that describes BMPs that are currently being

implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of water quality standards. The report may be incorporated in the annual update to the DAMP, unless the Executive Officer directs an earlier submittal. The report shall include an implementation schedule. The Executive Officer may require modifications to the report;

b. Submit any modifications to the report required by the Executive Officer within 30 days of notification;

c. Within 30 days following approval by the Executive Officer of the report described above, the permittees shall revise the DAMP and monitoring program to incorporate the approved modified BMPs that have been and will be implemented, the implementation schedule, and any additional monitoring required; and,

d. Implement the revised DAMP and monitoring program in accordance with the approved schedule.

So long as the permittees have complied with the procedures set forth above and are implementing the revised DAMP, the permittees do not have to repeat the same procedure for continuing or recurring exceedances of the same receiving water limitations unless the Executive Officer determines it is necessary to develop additional BMPs.

V. IMPLEMENTATION AGREEMENT

1. By July 1, 2002, the existing Implementation Agreement shall be revised to include the cities that were not signatories to this agreement. A copy of the signature page and any revisions to the Agreement shall be included in the annual report.
2. By July 1, 2002, the permittees shall evaluate the storm water management structure and the Implementation Agreement and determine the need for any revision. The corresponding annual report shall include the findings of this review and a schedule for any needed revisions.

VI. LEGAL AUTHORITY/ENFORCEMENT

1. The permittees shall maintain adequate legal authority to control the contribution of pollutants to the MS4 by storm water discharges and enforce those authorities.
2. The permittees shall take appropriate enforcement actions against any violators of their Water Quality Ordinance, in accordance with the adopted/established guidelines and procedures. All enforcement actions shall be consistent with the Enforcement Consistency Guide.
3. Permittees' ordinances or other local regulatory mechanisms shall include sanctions to ensure compliance. Sanctions shall include but are not limited to: monetary penalties, non-monetary penalties, bonding requirements, and/or permit denials/revocations/stays for non-compliance. If the permittees' current ordinances do not have a provision for civil or criminal penalties for violations of their water quality ordinances, the permittees shall enact such ordinances by November 15, 2003.

4. By November 15, 2003, each permittee shall submit a statement, signed by legal counsel, that the permittee has obtained all necessary legal authority to comply with this Order through adoption of ordinances and/or municipal code modifications.
5. The permittees shall continue to provide notification to Regional Board staff regarding storm water related information gathered during site inspections of industrial and construction sites regulated by the Statewide General Storm Water Permits and at sites that should be regulated under the State's General Permits. The notification should include any observed violations of the General Permits, prior history of violations, any enforcement actions taken by the permittee, and any other relevant information.
6. By November 15, 2003, the permittees shall review their water quality ordinances and provide a report on the effectiveness of these ordinances and associated enforcement programs, in prohibiting the following types of discharges to the MS4s (the permittees may propose appropriate control measures in lieu of prohibiting these discharges, where the permittees are responsible for ensuring that dischargers adequately maintain those control measures):
    a. Sewage, where a co-permittee operates the sewage collection system;
    b. Wash water resulting from the hosing or cleaning of gas stations, auto repair garages, and other types of automobile service stations;
    c. Discharges resulting from the cleaning, repair, or maintenance of any type of equipment, machinery, or facility, including motor vehicles, concrete mixing equipment, portable toilet servicing, etc.;
    d. Wash water from mobile auto detailing and washing, steam and pressure cleaning, carpet cleaning, and other such mobile commercial and industrial activities;
    e. Water from cleaning of municipal, industrial, and commercial sites, including parking lots, streets, sidewalks, driveways, patios, plazas, work yards and outdoor eating or drinking areas, etc.;
    f. Runoff from material storage areas or uncovered receptacles that contain chemicals, fuels, grease, oil, or other hazardous materials[7];
    g. Discharges of runoff from the washing of toxic materials[8] from paved or unpaved areas;
    h. Discharges of pool or fountain water containing chlorine, biocides, or other chemicals; pool filter backwash containing debris and chlorine;
    i. Pet waste, yard waste, litter, debris, sediment, etc.; and,
    j. Restaurant or food processing facility wastes such as grease, floor mat and trash bin wash water, food waste, etc.

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[7] Hazardous Material is defined as any substrate that poses a threat to human health or the environment due to its toxicity, corrosiveness, ignitability, explosive nature or chemical reactivity. These also include materials named by EPA to be reported if a designed quantity of the material is spilled into the waters of the United States or emitted into the environment.

[8] Toxic Material is a chemical or a mixture that may present an unreasonable risk of injury to health or the environment.

7. The Principal Permittee shall, on or before July 1, 2002, develop a restaurant inspection program which shall, at a minimum, address:
   a. Oil and grease disposal to verify that these wastes are not poured onto a parking lot, street or adjacent catch basin;
   b. Trash bin areas to verify that these areas are clean, the bin lids are closed, the bins are not filled with liquid and the bins have not been washed out;
   c. Parking lot, alley, sidewalk and street areas to verify that floormats, filters and garbage containers are not washed in those areas and that no washwater is poured in those areas;
   d. Parking lot areas to verify that they are cleaned by sweeping, not by hosing down and that the facility operator uses dry methods for spill cleanup; and,
   e. Inspection of existing devices designed to separate grease from wastewater (e.g., grease traps or interceptors) to ensure adequate capacity and proper maintenance.

VII. ILLEGAL CONNECTIONS; LITTER, DEBRIS AND TRASH CONTROL

1. The permittees shall continue to prohibit all illegal connections to the MS4s through their ordinances, inspections, and monitoring programs. If routine inspections or dry weather monitoring indicate any illegal connections, they shall be investigated and eliminated or permitted within 120 days of discovery and identification.
2. All reports of spills, leaks, and/or illegal dumping shall be promptly investigated and, where appropriate, reported to the Executive Officer within 24 hours (those incidents which may pose an immediate threat to human health or the environment, e.g., sewage spills that could impact water contact recreation, an oil spill that could impact wild life, a hazardous substance spill where residents are evacuated, etc.) by phone or e-mail, with a written report within 5 days. At a minimum, all sewage spills above 1,000 gallons and all reportable quantities of hazardous waste spills as per 40CFR 117 and 302 shall be reported within 24 hours and all other spill incidents shall be included in the annual report. The permittees may propose a reporting program, including reportable incidents and quantities, jointly with other agencies, such as the County Health Care Agency, for approval by the Executive Officer.
3. The permittees shall continue to implement appropriate control measures to reduce and/or to eliminate the discharge of trash and debris to waters of the U.S. These control measures shall be reported in the annual report.
4. By July 1, 2003, the permittees shall review their litter/trash control ordinances to determine the need for any revision. The permittees are encouraged to characterize trash, determine its main source(s) and develop and implement appropriate BMPs to control trash in urban runoff. The findings of this review shall be included in the annual report for 2002-2003.
5. By July 1, 2003, the permittees shall determine the need for any additional debris control measures. The findings shall be included in the annual report for 2002-2003.

VIII. MUNICIPAL INSPECTIONS OF CONSTRUCTION SITES

1. Each permittee shall develop by October 15, 2002, an inventory of all construction sites within its jurisdiction for which building or grading permits are issued and activities at the site include: soil movement; uncovered storage of materials or wastes, such as dirt, sand or fertilizer; or exterior mixing of cementaceous products, such as concrete, mortar or stucco. Sites will be included regardless of whether the construction site is subject to the California Statewide General NPDES Permit for Storm Water Discharges Associated with Construction Activities (General Permit) or other individual NPDES permit. This database shall be updated prior to each rainy season thereafter. This inventory shall be maintained in a computer-based database system and shall include relevant information on site ownership, General Permit WDID # (if any), size, location, etc. Inclusion of a Geographical Information System (GIS) is recommended but not required.

2. To establish priorities for inspection requirements under this Order, the permittees shall prioritize construction sites within their jurisdiction as a high, medium or low threat to water quality. Evaluation of construction sites should be based on such factors as soil erosion potential, project size, proximity and sensitivity of receiving waters and any other relevant factors. At a minimum, high priority construction sites shall include: sites over 50 acres; sites over 5 acres that are tributary to Clean Water Act section 303(d) waters listed for sediment or turbidity impairments; and sites that are tributary to and within 500 feet of an area defined by the Ocean Plan as an Area of Special Biological Significance (ASBS) .

3. Each permittee shall conduct construction site inspections for compliance with its ordinances (grading, Water Quality Management Plans, etc.) and local permits (construction, grading, etc.). Inspections shall include a review of erosion control and BMP implementation plans and an evaluation of the effectiveness and maintenance of the BMPs identified. Inspection frequency will, at a minimum, include the following:

   a. During the wet season (i.e., October 1 through April 30 of each year), all high priority sites are to be inspected, in their entirety, once a month. All medium priority sites are to be inspected at least twice during the wet season. All low priority sites are to be inspected at least once during the wet season. When BMPs or BMP maintenance is deemed inadequate or out of compliance, an inspection frequency of once every week will be maintained until BMPs and BMP maintenance are brought into compliance. During the 2001-2002 wet season, prior to the development of the inventory database, all construction sites must be visited at least twice. If a site is deemed out of compliance, an inspection frequency adequate to bring the site into compliance must be maintained;

   b. During the dry season (i.e., May 1 through September 30 of each year), all construction sites shall be inspected at a frequency sufficient to ensure that sediment and other pollutants are properly controlled and that unauthorized, non-storm water discharges are prevented; and,

   c. Information including, at a minimum, inspection dates, inspectors present and the results of the inspection, must be maintained in the database identified in Section VIII.1 or must be linked to that database. A copy of this database must be provided to the Regional Board with each annual report.

4. Each permittee shall enforce its ordinances and permits at all construction sites, as necessary, to maintain compliance with this Order. Sanctions for non-compliance must include: monetary penalties, bonding requirements and/or permit denial or revocation.
5. Within 24 hours of discovery, each permittee shall provide oral or e-mail notification to the Santa Ana Regional Water Quality Control Board of non-compliant sites within their jurisdiction that are determined to pose a threat to human health or the environment (e.g., sewage spills that could impact water contact recreation, an oil spill that could impact wildlife, a hazardous substance spill where residents are evacuated, etc.). Following oral notification, a written report must be submitted to the Santa Ana Regional Water Quality Control Board within 10 days, detailing the nature of the non-compliance, any corrective action taken by the site owner, other relevant information (e.g., past history of non-compliance, environmental damage resulting from the non-compliance, site owner responsiveness) and the type of enforcement that will be carried out by the permittee. Further, incidences of non-compliance shall be recorded along with the information noted in the written report and the final outcome/enforcement for the incident in the database identified in Sections VIII.1 and 3.c or must be linked to these databases.
6. The inspectors responsible for ensuring compliance at construction sites shall be trained in and have an understanding of: federal, state and local water quality laws and regulations as they apply to construction and grading activities; the potential effects of construction and urbanization on water quality; and implementation and maintenance of erosion control BMPs and sediment control BMPs and the applicable use of both. Each permittee shall have adequately trained its inspection staff by October 15, 2002, and on an annual basis, prior to the rainy season, thereafter. Training programs should be coordinated with the Santa Ana Regional Water Quality Control Board and prior notification of training shall be provided to Regional Board staff. New hires or transfers that will be performing construction inspections for the permittees must be trained within one month of starting inspection duties.
7. The permittees need not inspect facilities already inspected by Regional Board staff if the inspection was conducted within the specified time period.

IX. MUNICIPAL INSPECTIONS OF INDUSTRIAL FACILTIES

1. Each permittee shall develop by July 1, 2003, an inventory of industrial facilities within its jurisdiction with business permits or other authorization by permittees, that have the potential to discharge pollutants to the MS4. Facilities will be listed, regardless of whether the facility is subject to the California Statewide General NPDES Permit for Storm Water Discharges Associated with Industrial Activities (General Industrial Permit) or other individual NPDES permit. This database must be updated on an annual basis. This inventory must be maintained in a computer-based database system and must include relevant information on ownership, SIC code(s), General Industrial Permit WDID # (if any), size, location, etc. Inclusion of a Geographical Information System (GIS) is recommended but not required.
2. To establish priorities for inspection requirements under this Order, the permittees shall prioritize industrial facilities within their jurisdiction as a high, medium or low threat to water quality. Evaluation of these facilities should be based on such factors as type of

industrial activities (SIC codes), materials or wastes used or stored outside, pollutant discharge potential, facility size, proximity and sensitivity of receiving waters and any other relevant factors. At a minimum, a high priority shall be assigned to: facilities subject to section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA); facilities requiring coverage under the General Industrial Permit; facilities with a high potential for, or history of, unauthorized, non-storm water discharges; and facilities that are tributary to, and within 500 feet of, an area defined by the Ocean Plan as an Area of Special Biological Significance (ASBS).

3. Each permittee shall conduct industrial facility inspections for compliance with its ordinances and permits. Inspections shall include a review of material and waste handling and storage practices, pollutant control BMP implementation and maintenance and evidence of past or present unauthorized, non-storm water discharges. All high priority facilities identified in IX.2 shall be inspected and a report on these inspections shall be submitted by November 15, 2003 and a report of inspections during subsequent years shall be included in the annual report for that year.

4. After July 1, 2003, all high priority sites are to be inspected at least once a year; all medium priority sites are to be inspected at least once every two years; and all low priority sites are to be inspected at least once per permit cycle. In the event that inappropriate material or waste handling or storage practices are observed or there is evidence of past or present unauthorized, non-storm water discharges, an inspection frequency adequate to bring the site into compliance must be maintained (at a minimum, once a month). Once compliance is achieved, a minimum inspection frequency of once every four months will be maintained for the next calendar year.

5. By July 1, 2005, each permittee shall identify the remaining industrial facilities that do not have business permits or other authorization by the permittees. These facilities shall be added to the database identified in Section IX.1 and shall be prioritized in accordance with the specifications identified in Section IX.2.

6. Information including, at a minimum, inspection dates, inspectors present and the results of the inspection must be maintained in the database identified in Section IX.1 or must be linked to that database. A copy of this database must be provided to the Regional Board with each annual report.

7. Each permittee shall enforce its ordinances and permits at all industrial facilities as necessary to maintain compliance with this Order. Sanctions for non-compliance must include: monetary penalties, bonding requirements and/or permit denial or revocation.

8. Within 24 hours, each permittee shall provide oral or e-mail notification to the Santa Ana Regional Water Quality Control Board of non-compliant facilities within their jurisdiction that are determined to pose a threat to human health or the environment (e.g., sewage spills that could impact water contact recreation, an oil spill that could impact wildlife, a hazardous substance spill where residents are evacuated, etc.). Following oral notification, a written report must be submitted to the Santa Ana Regional Water Quality Control Board within 10 days, detailing the nature of the non-compliance, any corrective action taken by the site owner, other relevant information (e.g., past history of non-compliance, environmental

damage resulting from the non-compliance, facility owner responsiveness) and the type of enforcement that will be carried out by the permittee. Further, incidences of non-compliance shall be recorded along with the information noted in the written report and the final outcome/enforcement for the incident, in the database identified in Section IX.1.

9. The inspectors responsible for ensuring compliance at industrial facilities shall be trained in and have an understanding of: federal, state and local water quality laws and regulations as they apply to industrial activities; the potential effects of industrial discharges and urbanization on water quality; and implementation and maintenance of pollutant control BMPs. Each permittee shall have adequately trained their inspection staff by July 1, 2003, and on an annual basis thereafter. Training programs should be coordinated with the Santa Ana Regional Water Quality Control Board and prior notification of training shall be provided to Regional Board staff. New hires or transfers that will be performing industrial inspections for the permittees must be trained within one month of starting inspection duties.
10. The permittees need not inspect facilities already inspected by Regional Board staff, if the inspection was conducted within the specified time period.

X. MUNICIPAL INSPECTIONS OF COMMERCIAL FACILITIES

1. Each permittee shall develop by July 1, 2003, an inventory of the following commercial facilities/companies listed below within its jurisdiction. This database must be updated on an annual basis. This inventory must be maintained in a computer-based database system and must include relevant information on ownership, size, location, etc. Inclusion of a Geographical Information System (GIS) is recommended but not required.

    a. Automobile mechanical repair, maintenance, fueling or cleaning;

    b. Automobile and other vehicle body repair or painting;

    c. Mobile automobile or other vehicle washing;

    d. Mobile carpet, drape or furniture cleaning;

    e. Mobile high pressure or steam cleaning;

    f. Painting and coating;

    g. Nurseries and greenhouses;

    h. Landscape and hardscape installation;

    i. Pool, lake and fountain cleaning;

j. Other commercial sites/sources that the Permittee determines may contribute a significant pollutant load to the MS4; and,

k. Any commercial sites or sources that are tributary to and within 500 feet of an area defined by the Ocean Plan as an Area of Special Biological Significance (ASBS).

2. To establish priorities for inspection requirements under this Order, the permittees shall prioritize commercial facilities/companies within their jurisdiction as a high, medium or low threat to water quality based on such factors as the type, magnitude and location of the commercial activity, potential for discharge of pollutants to the MS4 and any history of unauthorized, non-storm water discharges.

3. Each permittee shall conduct commercial facility inspections for compliance with its ordinances and permits. Inspections shall include a review of material and waste handling and storage practices, pollutant control BMP implementation and maintenance and evidence of past or present unauthorized, non-storm water discharges.

4. After July 1, 2003, each permittee shall establish inspection frequencies and priorities as determined by the threat to water quality prioritization described in X.2. In the event that inappropriate material or waste handling or storage practices are observed, or there is evidence of past or present unauthorized, non-storm water discharges, an inspection frequency adequate to bring the site into compliance must be maintained.

5. By July 1, 2004, all high priority sites shall be inspected at least once.

6. Information including, at a minimum, inspection dates, inspectors present and the results of the inspection must be maintained in the database identified in Section X.1 or must be linked to that database. A copy of this database must be provided to the Regional Board with each annual report.

7. Each permittee shall enforce its ordinances and permits at commercial facilities. Sanctions for non-compliance must include: monetary penalties, bonding requirements and/or permit denial or revocation.

8. Within 24 hours, each permittee shall provide oral or e-mail notification to the Santa Ana Regional Water Quality Control Board of non-compliant facilities within their jurisdiction, that are determined to pose a threat to human health or the environment (e.g., sewage spills that could impact water contact recreation, an oil spill that could impact wildlife, a hazardous substance spill where residents are evacuated, etc.). Following oral notification, a written report must be submitted to the Santa Ana Regional Water Quality Control Board within 5 days. For incidents that do not pose a threat to human or environmental health, the permittees shall submit a written report within 30 days of the incident. All written reports shall detail the nature of the non-compliance, identify any corrective action taken by the site owner, note other relevant information (e.g., past history of non-compliance, environmental damage resulting from the non-compliance,

facility owner responsiveness) and the type of enforcement that will be carried out by the permittee. Further, incidences of non-compliance shall be recorded along with the information noted in the written report and the final outcome/enforcement for the incident in the database identified in Section X.1.

9. The inspectors responsible for ensuring compliance at commercial facilities shall be trained in, and have an understanding of, Federal, State and local water quality laws and regulations as they apply to industrial and commercial activities; the potential effects of industrial discharge and urbanization on water quality; and implementation and maintenance of pollutant control BMPs. Each permittee shall have adequately trained their inspection staff by July 1, 2003 and on an annual basis thereafter. Training programs should be coordinated with the Santa Ana Regional Water Quality Control Board and prior notification of training shall be provided to Regional Board staff. New hires or transfers that will be performing commercial inspections for the permittees must be trained within one month of starting inspection duties.

10. The permittees need not inspect facilities already inspected by Regional Board staff if the inspection was conducted within the specified time period.

XI. SEPTIC SYSTEM FAILURES AND PORTABLE TOILET DISCHARGES

1. By July 1, 2003, the permittees, whose jurisdictions have 50 or more septic tank or sub-surface disposal systems in use, shall identify with the appropriate governing agency, a mechanism to determine the effect of septic system failures on storm water quality and a mechanism to address such failures.
2. By July 1, 2003, the principal permittee shall review the permittees' current oversight programs for portable toilets to determine the need for any revision.

XII. NEW DEVELOPMENT (INCLUDING SIGNIFICANT RE-DEVELOPMENT)

A. GENERAL REQUIREMENTS:

1. By July 1, 2002, the permittees shall establish a mechanism to ensure (prior to issuance of any local permits or other approvals) that all construction sites that are required to obtain coverage under the State's General Storm Water Permit for construction sites have filed with the State Board a Notice of Intent to be covered by the relevant general permit.
2. Each permittee shall minimize the short and long-term impacts on receiving water quality from new developments and re-developments, as required in Section XII.B.1., below. In order to reduce pollutants and runoff flows from new developments and re-developments to the maximum extent practicable, permittees should, at a minimum:
   a. Review General Plan/CEQA Processes
   b. Modify the Project Approval Process
   c. Conduct Public/Business Education

3. By December 19, 2002, the permittees shall review their planning procedures and CEQA document preparation processes to ensure that urban runoff-related issues are properly considered and addressed. If necessary, these processes should be revised by that date to consider and mitigate impacts to storm water quality. These changes may include revising the General Plan, modifying the project approval processes, including a section on urban runoff related water quality issues in an addendum CEQA checklist, and conducting training for project proponents. The findings of this review and the actions taken by the permittees shall be reported to the Regional Board by January 2, 2003. The following potential impacts shall be considered during CEQA review:

   a. Potential impact of project construction on storm water runoff;

   b. Potential impact of project's post-construction activity on storm water runoff;

   c. Potential for discharge of storm water pollutants from areas of material storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas. loading docks or other outdoor work areas;

   d. Potential for discharge of storm water to affect the beneficial uses of the receiving waters;

   e. Potential for significant changes in the flow velocity or volume of storm water runoff to cause environmental harm; and,

   f. Potential for significant increases in erosion of the project site or surrounding areas.

4. By July 1, 2004, the permittees shall review their watershed protection principles and policies in their General Plan or related documents (such as Development Standards, Zoning Codes, Conditions of Approval, Development Project Guidance) to ensure that these principals and policies are properly considered and are incorporated into these documents. The findings of this review and the actions taken by the permittees shall be reported to the Regional Board by November 15, 2004. These principles and policies should include, but not be limited to, the following considerations:

   a. Limit disturbance of natural water bodies and drainage systems; conserve natural areas; protect slopes and channels; and minimize impacts from storm water and urban runoff on the biological integrity of natural drainage systems and water bodies;

   b. Minimize changes in hydrology and pollutant loading; require incorporation of controls, including structural and non-structural BMPs, to mitigate the projected increases in pollutant loads and flows; ensure that post-development runoff rates and velocities from a site have no significant adverse impact on downstream erosion and stream habitat; minimize the quantity of storm water directed to impermeable surfaces and the MS4s; and maximize the percentage of permeable surfaces to allow more percolation of storm water into the ground;

   c. Preserve wetlands, riparian corridors, and buffer zones and establish reasonable limits on the clearing of vegetation from the project site;

d. Encourage the use of water quality wetlands, biofiltration swales, watershed-scale retrofits, etc., where such measures are likely to be effective and technically and economically feasible;

e. Provide for appropriate permanent measures to reduce storm water pollutant loads in storm water from the development site; and,

f. Establish development guidelines for areas particularly susceptible to erosion and sediment loss.

5. Each permittee shall provide the Regional Board with the draft amendment or revision when a pertinent General Plan element or the General Plan is noticed for comment in accordance with Govt. Code § 65350 et seq.

6. By July 1, 2003, the permittees shall review and, as necessary, revise their current grading/erosion control ordinances in order to reduce erosion caused by new development or significant re-development projects.

7. The permittees shall, through conditions of approval, ensure proper maintenance and operation of any permanent flood control structures installed in new developments. The parties responsible for the maintenance and operation of the facilities and a funding mechanism for operation and maintenance, shall be identified prior to approval of the project.

8. By November 15, 2003, the principal permittee shall submit a proposal for a study to evaluate the effectiveness of a group of selected BMPs for controlling erosion during new development. Based on the results of this study, one or more BMPs will be identified as (a) County-preferred BMP(s) for erosion control during new development. This proposal shall include details of the new development project site, the BMPs selected for the study, and a proposed schedule. The proposed and final BMP selection shall be approved by the Regional Board Executive Officer and the study shall be completed by the end of this permit term.

9. The permittees shall continue to implement the new development BMPs (DAMP, Appendix G) and BMPs for public works construction (DAMP, Appendix H).

10. Within six months of adoption of this order, the permittees shall review their DAMP to determine the need for:

    a. Re-establishing the New Development Task Force

    b. Establishing a Water Quality Plan verification program.

B. WATER QUALITY MANAGEMENT PLAN (WQMP) FOR URBAN RUNOFF (FOR NEW DEVELOPMENT/SIGNIFICANT REDEVELOPMENT):

1. By March 1, 2003, the permittees shall review their existing BMPs for New Developments (Appendix G of the DAMP) and submit for review and approval by the Executive Officer, a revised WQMP for urban runoff from new developments/ significant re-developments for the type of projects listed below:

a. All significant re-development projects, where significant re-development is defined as the addition of 5,000 or more square feet of impervious surface on an already developed site. This includes additional buildings and/or structures, extension of existing footprint of a building, construction of parking lots, etc.

b. Home subdivisions of 10 units or more. This includes single family residences, multi-family residences, condominiums, apartments, etc.

c. Commercial and industrial developments of 100,000 square feet or more. This includes non-residential developments such as hospitals, educational institutions (to the extent the permittees have authority to regulate these developments), recreational facilities, mini-malls, hotels, office buildings, warehouses, and light & heavy industrial facilities.

d. Automotive repair shops (with SIC codes 5013, 5014, 5541, 7532-7534, 7536-7539).

e. Restaurants where the land area of development is 5,000 square feet or more.

f. All hillside developments on 10,000 square feet or more, which are located on areas with known erosive soil conditions or where the natural slope is twenty-five percent or more.

g. Developments of 2,500 square feet of impervious surface or more adjacent to (within 200 feet) or discharging directly into environmentally sensitive areas, such as areas designated in the Ocean Plan as areas of special biological significance or waterbodies listed on the CWA Section 303(d) list of impaired waters.

h. Parking lots of 5,000 square feet or more exposed to storm water. Parking lot is defined as a land area or facility for the temporary storage of motor vehicles.

2. The permittees are encouraged to include in the WQMP the development and implementation of regional and/or watershed management programs that address runoff from new development and significant re-development. The WQMP shall include BMPs for source control, pollution prevention, and/or structural treatment BMPs. For all structural treatment controls, the WQMP shall identify the responsible party for maintenance of the treatment system, and a funding source or sources for its operation and maintenance. The goal of the WQMP is to develop and implement practicable programs and policies to minimize the effects of urbanization on site hydrology, urban runoff flow rates or velocities and pollutant loads. This goal may be achieved through watershed-based structural treatment controls, in combination with site-specific BMPs. The WQMP shall reflect consideration of the following goals, which may be addressed through on-site-and/or watershed-based BMPs.

   a. The pollutants in post-development runoff shall be reduced using controls that utilize best available technology (BAT) and best conventional tecnology (BCT).

   b. The discharge of any listed pollutant to an impaired waterbody on the 303(d) list shall not cause an exceedence of receiving water quality objectives.

3. During the time that the WQMP is being revised, the permittees shall implement their existing requirements for new development (Appendix G of the DAMP). If the Executive Officer does not approve the revised WQMP by October 1, 2003, as meeting

the goals proposed in XII.B.2, above and providing an equivalent or superior degree of treatment as the sized criteria outlined in XII.B.3.A, B and C, below, structural BMPs shall be required for all new development and significant redevelopment[2]. Minimum structural BMPs must either be sized to comply with one of the following numeric sizing criteria or be deemed by the Principal Permittee to provide equivalent or superior treament, either on a site basis or a watershed basis:

A. Volume

Volume–based BMPs shall be designed to infiltrate, filter, or treat either:

1. The volume of runoff produced from a 24-hour, 85th percentile storm event, as determined from the local historical rainfall record; or,
2. The volume of annual runoff produced by the 85th percentile, 24-hour rainfall event, determined as the maximized capture storm water volume for the area, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87 (1998); or,
3. The volume of annual runoff based on unit basin storage volume, to achieve 80% or more volume treatment by the method recommended in California Stormwater Best Management Practices Handbook – Industrial/Commercial (1993); or,
4. The volume of runoff, as determined from the local historical rainfall record, that achieves approximately the same reduction in pollutant loads and flows as achieved by mitigation of the 85th percentile, 24-hour runoff event;

OR

B. Flow

Flow-based BMPs shall be designed to infiltrate, filter, or treat either:

1. The maximum flow rate of runoff produced from a rainfall intensity of 0.2 inch of rainfall per hour; or,
2. The maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity, as determined from the local historical rainfall record, multiplied by a factor of two; or,
3. The maximum flow rate of runoff, as determined from the local historical rainfall record, that achieves approximately the same reduction in pollutant loads and flows as achieved by mitigation of the 85th percentile hourly rainfall intensity multiplied by a factor of two.

C. Groundwater Protection

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[2] Where new development is defined as projects for which tentative tract or parcel map approval was not received by July 1, 2003 and new re-development is defined as projects for which all necessary permits were not issued by July 1, 2003. New development does not include projects receiving map approvals after July 1, 2003 that are proceeding under a common scheme of development that was the subject of a tentative tract or parcel map approval that occurred prior to July 1, 2003.

Any structural infiltration BMPs shall meet the following minimum requirements:

1. Use of structural infiltration treatment BMPs shall not cause or contribute to an exceedance of groundwater water quality objectives.
2. Source control and pollution prevention control BMPs shall be implemented to protect groundwater quality.
3. Structural infiltration treatment BMPs shall not cause a nuisance or pollution, as defined in Water Code Section 13050 .

4. The permittees may propose any equivalent sizing criteria for treatment BMPs or other controls that will achieve greater or substantially similar pollution control benefits. In the absence of approved equivalent sizing criteria, the permittees shall implement the above stated sizing criteria.

5. If a particular BMP is not technically feasible, other BMPs should be implemented to achieve the same level of compliance, or if the cost of BMP implementation greatly outweighs the pollution control benefits, the permittees may grant a waiver of the numeric sizing criteria. All waivers, along with waiver justification documentation, must be reported to the Regional Board in writing within 30 days. The permittees may propose to establish an urban runoff fund to be used for urban water quality improvement projects within the same watershed that is funded by contributions from developers granted waivers. If it is determined by the Regional Board that waivers are being inappropriately granted, this Order may be reopened to modify these waiver conditions.

6. The obligation to install minimum structural BMPs at new development is met if, for a common scheme of development, BMPs are constructed with the requisite capacity to serve the entire common scheme, even if cerain phases of the common scheme may not have BMP capacity located on that phase in accordance with the requirements specified above.

XIII. PUBLIC EDUCATION AND OUTREACH

1. The permittees shall continue to implement the public education efforts already underway and shall implement the most effective elements of the comprehensive public and business education strategy contained in the Report of Waste Discharge/DAMP. By July 1, 2002, the permittees shall complete a public awareness survey to determine the effectiveness of the current public and business education strategy and provide a future action plan.

2. When feasible, the permittees shall participate in joint outreach with other programs including, but not limited to, the State of California Storm Water Quality Task Force, Caltrans and other municipal storm water programs to ensure that a consistent message on storm water pollution prevention is disseminated to the public. The permittees shall sponsor or staff a storm water table or booth at community, regiona, and/or countywide events to distribute public education materials to the public. Each permittee shall participate in at least one event per year.

3. By March 1, 2002, the permittees shall establish a Public Education Committee to provide oversight and guidance for the implementation of the public education program. The Public Education Committee shall meet at least twice per year. The Public Education Committee shall make recommendations for any changes to the public and business education program. The goal of the public and business education program shall be to target 100% of the residents, including businesses, commercial and industrial establishments. Through use of local print, radio and television, the permittees must ensure that the public and business education program makes a minimum of 10 million impressions per year and that those impressions measurably increase the knowledge and measurably change the behavior of the targeted groups. By November 15, 2002, the Public Education Committee shall propose a study for measuring changes in knowledge and behavior as a result of the education program. Upon approval by the Regional Board Executive Officer, the study shall be completed by the end of the permit cycle. By July 1, 2002, the Public Education Committee shall develop BMP guidance for restaurants, automotive service centers and gasoline service stations for the industrial facility inspectors to distribute to these facilities during inspections. Further, for restaurant, automotive service centers and gasoline service station corporate chains, information is to be developed that will be provided to corporate environmental managers during outreach visits that will take place twice during the permit term.
4. By July 1, 2002, the permittees shall develop public education materials to encourage the public to report (including a hotline number and web site to report) illegal dumping and unauthorized, non-storm water discharges from residential, industrial, construction and commercial sites into public streets, storm drains and other waterbodies; clogged storm drains; faded or missing catch basin stencils and general storm water and BMP information. This hotline and web site shall be included in the public and business education program and shall be listed in the governmental pages of all regional phone books.
5. By July 1, 2003, the permittees shall develop BMP guidance for the control of those potentially polluting activities not otherwise regulated by any agency including guidelines for the household use of fertilizers, pesticides, herbicides and other chemicals, and guidance for mobile vehicle maintenance, carpet cleaners, commercial landscape maintenance, and pavement cutting. These guidance documents shall be distributed to the public, trade associations, etc., through participation in community events, trade association meetings and/or mail.
6. By July 1, 2003, the permittees shall conduct an evaluation to determine the best method of establishing a mechanism(s) for providing educational and General Industrial Permit materials to businesses within their jurisdiction.

XIV. MUNICIPAL FACILITIES/ACTIVITIES

1. Each permittee shall implement the recommendations in the Environmental Performance Report to ensure that public agency facilities and activities do not cause or contribute to a pollution or nuisance in receiving waters. By July 1 of each year, the permittees shall review all their activities and facilities to determine the need for any revisions to the Environmental Performance Reports. The annual report shall include the findings of this review and a schedule for any needed revisions. All revisions should consider a pollution prevention

strategy to ensure that the public agency facilities and/or activities that are currently not required to obtain coverage under the State's general storm water permits reduce the discharge of pollutants into the waters of the U.S. to the maximum extent practicable.

2. By July 1, 2003, the permittees shall complete an assessment of their flood control facilities to evaluate opportunities to configure and/or to reconfigure channel segments to function as pollution control devices and to optimize beneficial uses. These modifications may include in-channel sediment basins, bank stabilization, water treatment wetlands, etc. This shall be reported in the 2002-2003 annual report.

3. By July 1, 2002, the principal permittee shall develop and distribute model maintenance procedures for public agency activities such as street sweeping; catch basin stenciling; drainage facility inspection, cleaning and maintenance, etc. This shall be reported in the 2001-2002 annual report.

4. By July 1, 2002, the principal permittee shall develop and distribute BMP guidance for public agency and contract field operations and maintenance staff to provide guidance in appropriate pollution control measures, how to respond to spills and reports of illegal discharges, etc. This shall be reported in the 2001-2002 annual report.

5. At least on an annual basis, the principal permittee shall provide training to public agency staff and to contract field operations staff on fertilizer and pesticide management, model maintenance procedures, implementation of environmental performance reporting program and other pollution control measures. Each permittee shall attend at least three of these training sessions during the five year term of this permit (from 2001 to 2006).

6. By July 1, 2002, the principal permittee shall develop a model maintenance procedure for drainage facilities. This shall be included in the 2001-2002 annual report. Each permittee shall inspect, clean and maintain at least 80% of its drainage facilities on an annual basis, with 100% of the facilities included in a two-year period, using the model maintenance procedures developed by the principal permittee. This shall be included in the annual report.

7. By July 1, 2004, the permittees shall develop and submit for approval by the Executive Officer, a more aggressive program for cleaning out drainage facilities, including catch basins. This program should be based on a list of drainage facilities, prioritized on such factors as distance to receiving water, receiving water beneficial uses and impairments of beneficial uses, historical pollutant types and loads from past inspections/cleanings and the presence of downstream regional facilities that would remove the types of pollutants found in the drainage facility. Using this list, the permittees shall propose clean out schedules for all drainage facilities with a minimum frequency of once a year and a maximum frequency of monthly, during the storm season. The permittees should be prepared to implement the approved clean out program beginning with the 2004-2005 storm season.

8. By July 1, 2002, the permittees shall evaluate the applicability of the Environmental Performance Program to municipal maintenance contracts, contract for field maintenance operations, and leases. This shall be included in the 2001-2002 annual report.

XV. MUNICIPAL CONSTRUCTION PROJECTS/ACTIVITIES

1. This order authorizes the discharge of storm water runoff from construction projects that may result in land disturbance of five (5) acres or more (or less than five acres, if it is part of a larger common plan of development or sale which is five acres or more) that are under ownership and/or direct responsibility of any of the permittees. All permittee construction activities shall be in accordance with DAMP, Appendix H.
2. Prior to commencement of construction activities, the permittees shall notify the Executive Officer of the Regional Board of the proposed construction project. Upon completion of the construction project, the Executive Officer shall be notified of the completion of the project.
3. The permittees shall develop and implement a storm water pollution prevention plan (SWPPP) and a monitoring program that is specific for the construction project, prior to the commencement of any of the construction activities. The SWPPP shall be kept at the construction site and released to the public and/or Regional Board staff upon request.
4. The SWPPP and the monitoring program for the construction projects shall be consistent with the requirements of the latest version of the State's General Construction Activity Storm Water Permit.
5. The permittees shall give advance notice to the Executive Officer of the Regional Board of any planned changes in the construction activity, which may result in non-compliance with the latest version of the State's General Construction Activity Storm Water Permit.
6. All other terms and conditions of the latest version of the State's General Construction Activity Storm Water Permit shall be applicable.

XVI. SUB-WATERSHEDS AND TMDL IMPLEMENTATION

1. The permittees shall meet the following target load allocations for nutrients in urban runoff by implementing the BMPs contained in Appendix N (DAMP, Section 12) and in accordance with the approved TMDL implementation plan incorporated in the Basin Plan.

(This section intentionally left blank.)

Table 1. Seasonal Load Allocations of Total Nitrogen for the Newport Bay Watershed

Nutrient TMDL	1990-1997 Loading	2002 Summer Allocation (Apr-Sept)[5]	2007 Summer Allocation (Apr-Sept)[5]	2012 Winter Allocation (Oct-Mar)[4, 5, 6]
Newport Bay Watershed	lbs/year TN[1,2]	lbs/season TN	lbs/season TN	lbs/season TN
Wasteload Allocation				
Urban runoff	277,131[3]	20,785	16,628	55,442
		5 year target	10 year target	15 year target

1 TIN = (NO3+NH3).
2 TN = (TIN + Organic N).
3 Estimated annual average (summer and winter loading).
4 Total nitrogen winter loading limit applies between October 1 and March 31 when the mean daily flow rate at San Diego Creek at Campus Drive is below 50 cubic feet per second (cfs), and when the mean daily flow rate in San Diego Creek at Campus Drive is above 50 cubic feet per second (cfs), but not as the result of precipitation.
5 Compliance to be achieved no later than this date. The Regional Board may require earlier compliance with these targets when it is feasible and reasonable.
6 Assumes 67 non-storm days.

Table 2. Annual Total Phosphorous Load Allocations For The Newport Bay Watershed

	2002 Allocation lbs/year TP[1]	2007 Allocation lbs/year TP[1]
TMDL	86,912	62,080
Urban areas	4,102	2,960

1 Compliance to be achieved no later than this date. The Regional Board may require earlier compliance with these targets when it is feasible and reasonable.

Table 3. Annual Total Nitrogen Load Allocations For San Diego Creek, Reach 2 During Non-Storm Conditions.[1]

	2012 Allocation lbs/day TN[2]
TMDL	14 lbs/day (TN)
Waste Load Allocation (Urban runoff)	5.5 lbs/day (TN)

[1] Total nitrogen loading limit applies when the mean daily flow rate at San Diego Creek at Culver Drive is below 25 cubic feet per second (cfs), and when the mean daily flow rate in San Diego Creek at Culver Drive is above 25 cubic feet per second (cfs), but not as the result of precipitation.

[2] Compliance to be achieved no later than this date. The Regional Board may require earlier compliance with these targets when it is feasible and reasonable.

2. The permittees shall meet the following target load allocations for sediment in urban runoff by implementing the BMPs contained in Appendix N of the DAMP and the "March 1999 Technical Report on the Implementation of the TMDL for Sediment in the Newport Bay Watershed, the October 1999 Preliminary Sediment Load Allocation Analysis for San Diego Creek and Newport Bay, and the February 2000 Sediment Yield and Transport Investigation for San Diego Creek and Newport Bay".

    a. The load allocations for sediment discharges to Newport Bay from urban areas shall not exceed 2,500 tons per year, implemented as a 10-year running annual average.

    b. The load allocations for sediment discharges to San Diego Creek and its tributaries from urban areas shall not exceed 2,500 tons per year, implemented as a 10-year running annual average.

3. The permittees shall revise Appendix N of the DAMP to include implementation measures and schedules for further studies related to the TMDL for fecal coliform in Newport Bay, as set fourth in the January 2000, March 2000 and April 2000 Newport Bay Fecal Coliform TMDL Technical Reports submitted by the permittees.

4. This order may be reopened to include additional requirements based on new or revised TMDLs.

XVII. PROGRAM MANAGEMENT/DAMP REVIEW

1. By July 1 of each year, the permittees shall evaluate the DAMP to determine whether any revisions are necessary in order to reduce pollutants in MS4 discharges to the maximum extent practicable. In addition, the first annual review after adoption of this order shall include the following:

    a. Review of the formal training needs of municipal employees

    b. Review of coordinating meeting/training for the designated NPDES inspectors.

2. The annual report shall include the findings of this review and a schedule for any needed revisions or a copy of the amended DAMP with the proposed changes.

3. The permittees shall modify the DAMP, at the direction of the Regional Board Executive Officer, to, as necessary, incorporate additional provisions. Such provisions may include regional and watershed-specific requirements and/or waste load allocations developed and approved pursuant to the TMDL process.
4. The Permittee Committee shall meet at least six times a year to discuss issues related to permit implementation and regional and statewide issues. Each permittee's designated representative or a designated alternate should attend at least 75% of these meetings.

XVIII. FISCAL RESOURCES

1. The permittees shall prepare and submit a unified fiscal analysis to the Executive Officer of the Regional Board. The fiscal analysis shall be submitted with the Annual Report document no later than November 15th of each year and shall, at a minimum, include the following:
    a. Each permittee's expenditures for the previous fiscal year,
    b. Each permittee's budget for the current fiscal year,
    c. A description of the source of funds, and
    d. Each permittee's estimated budget for the next fiscal year.

XIX. PROVISIONS

1. All reports submitted by the permittees as per the requirements in this Order for the approval of the Executive Officer shall be publicly noticed and made available on the Regional Board's website, or through other means, for public review and comments. The Executive Officer shall consider all comments received prior to approval of the reports. Any unresolved significant issues shall be scheduled for a public hearing at a Regional Board meeting prior to approval by the Executive Officer.
2. The purpose of this Order is to require the implementation of best management practices to reduce, to the maximum extent practicable, the discharge of pollutants from the MS4 in order to support reasonable further progress towards attainment of water quality objectives.

    Permittees shall demonstrate compliance with all the requirements in this order and specifically with Section III.2 Discharge Limitations and Section IV. Receiving Water Limitations, through timely implementation of their DAMP and any modifications, revisions, or amendments developed pursuant to this order approved by the Executive Officer or determined by the permittee to be necessary to meet the requirements of this order. The DAMP, as included in the Report of Waste Discharge, including any approved amendments thereto, is hereby made an enforceable component of this order.
3. The permittees shall, at a minimum, implement all elements of the DAMP. Where the dates in the DAMP are different than those of this order, the dates in this order shall prevail. Any proposed revisions to the DAMP shall be submitted with the Annual Report to the Executive Officer of the Regional Board for review and approval. All

approved revisions to the DAMP shall be implemented as per the time schedules approved by the Executive Officer. In addition to those specific controls and actions required by (1) the terms of this Order and (2) the DAMP, each permittee shall implement additional controls, if any are necessary, to reduce the discharge of pollutants in storm water to the maximum extent practicable as required by this Order.

4. The permittees shall comply with Monitoring and Reporting Program No. R8-2002-0010, and any revisions thereto, which is hereby made a part of this order. The Executive Officer is authorized to revise the Monitoring and Reporting Program to allow the permittees to participate in regional, statewide, national or other monitoring programs in lieu of or in addition to Monitoring and Reporting Program No. R8-2002-0010.

5. By November 15, 2002, the permittees, in coordination with the Orange County Fire Chiefs Association, shall develop a list of appropriate BMPs to be implemented to reduce pollutants from training activities, fire hydrant/sprinkler testing or flushing, non-emergency fire fighting and any BMPs feasible for emergency fire fighting flows.

6. The permittees should consult the Orange County Vector Control District to ensure that structural treament systems are designed to minimize the potential for vector breeding.

7. Upon approval by the Executive Officer of the Regional Board, all plans, reports and subsequent amendments required by this order shall be implemented and shall become an enforceable part of this order. Prior to approval by the Executive Officer, these plans, reports and amendments shall not be considered as an enforceable part of this order.

8. The permittees shall report to the Executive Officer of the Regional Board:

   a. Any enforcement actions and discharges of storm or non-storm water, known to the permittees, which may have an impact on human health or the environment,

   b. Any suspected or reported activities on federal, state, or other entity's land or facilities, where the permittees do not have any jurisdiction, and where the suspected or reported activities may be contributing pollutants to waters of the US.

   (Also see reporting requirements in Monitoring and Reporting Program No. R8-2002-0010)

9. The permit application and special NPDES program requirements contained in 40 CFR 122.21 (a), (b), (d)(2), (f), (p); 122.41 (a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k), (l); and 122.42 (c) are incorporated into this order by reference.

XX. PERMIT EXPIRATION AND RENEWAL

1. This order expires on January 18, 2007 and the permittees must file a Report of Waste Discharge (permit application) no later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements. The Report of Waste Discharge shall, at a minimum, include the following:

   a. Any revisions to the Drainage Area Management Plan including, but not limited to, all the activities the permittees propose to undertake during the next permit term,

goals and objectives of such activities, an evaluation of the need for additional source control and/or structural BMPs, any proposed pilot studies, etc.;

b. Changes in land use and/or population including land use map updates;

c. Any significant changes to the storm drain systems, outfalls, detention or retention basins or dams and other controls including map updates of the storm drain systems; and,

d. Any new or revised program elements and compliance schedule(s) necessary to comply with Section IV of this order.

2. This Order may be modified, revoked or reissued prior to its expiration date for the following reasons:

   a. To address significant changes in conditions identified in the technical reports required by the Regional Board which were unknown at the time of the issuance of this order;

   b. To incorporate applicable requirements of statewide water quality control plans adopted by the State Water Resources Control Board or any amendments to the Basin Plan approved by the Regional Board, the State Board and, if necessary, by the Office of Administrative Law;

   c. To comply with any applicable requirements, guidelines, or regulations issued or approved under the Clean Water Act, if the requirements, guidelines, or regulations contain different conditions or additional requirements than those included in this order; or,

   d. To incorporate any requirements imposed upon the permittees through the TMDL process.

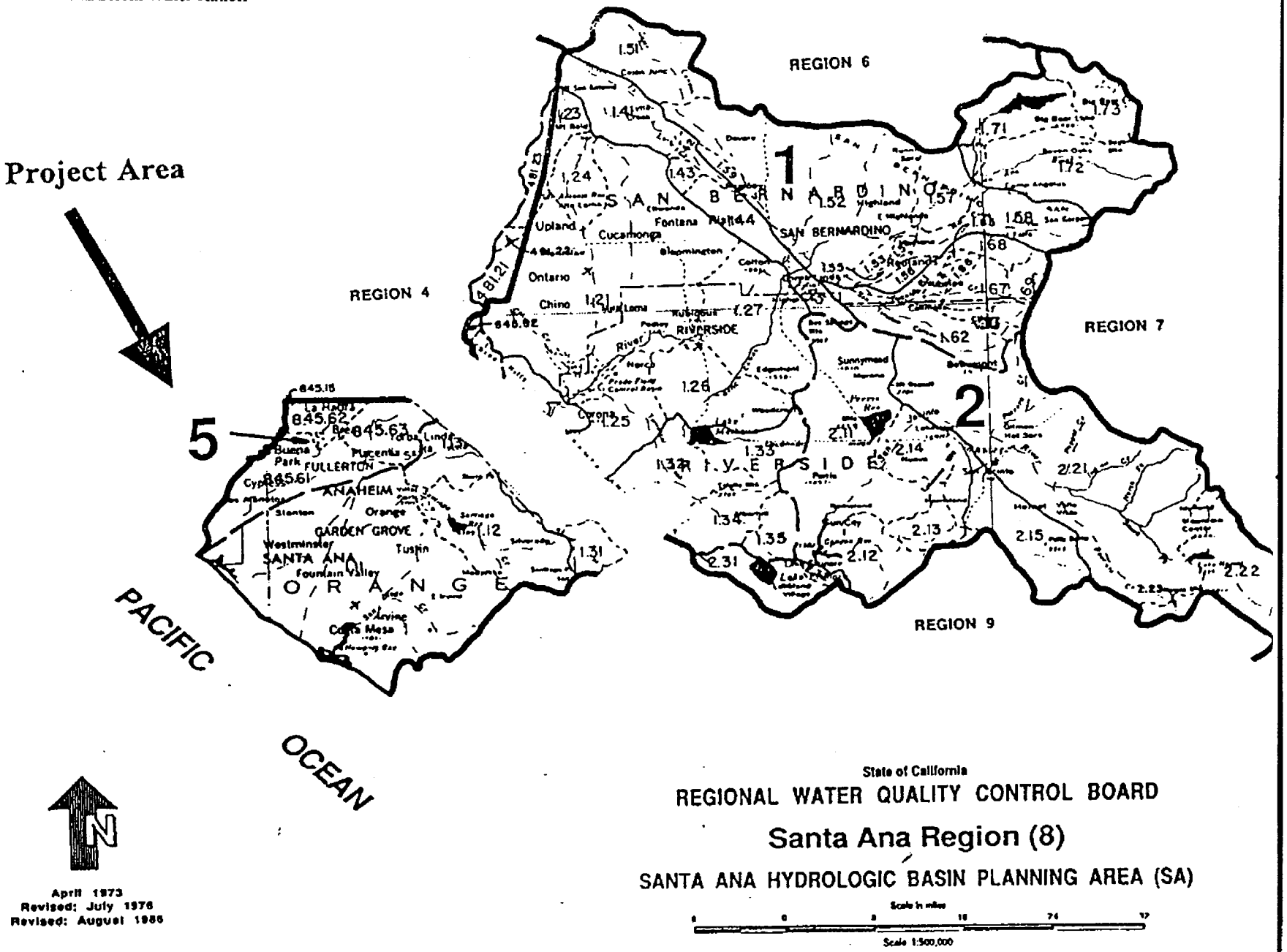
3. This order shall serve as a National Pollutant Discharge Elimination System (NPDES) Permit pursuant to Section 402 (p) of the Clean Water Act, or amendments thereto, and shall become effective ten days after the date of its adoption, provided the Regional Administrator of the U. S. EPA has no objections. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

4. Order No. 96-31 is hereby rescinded.

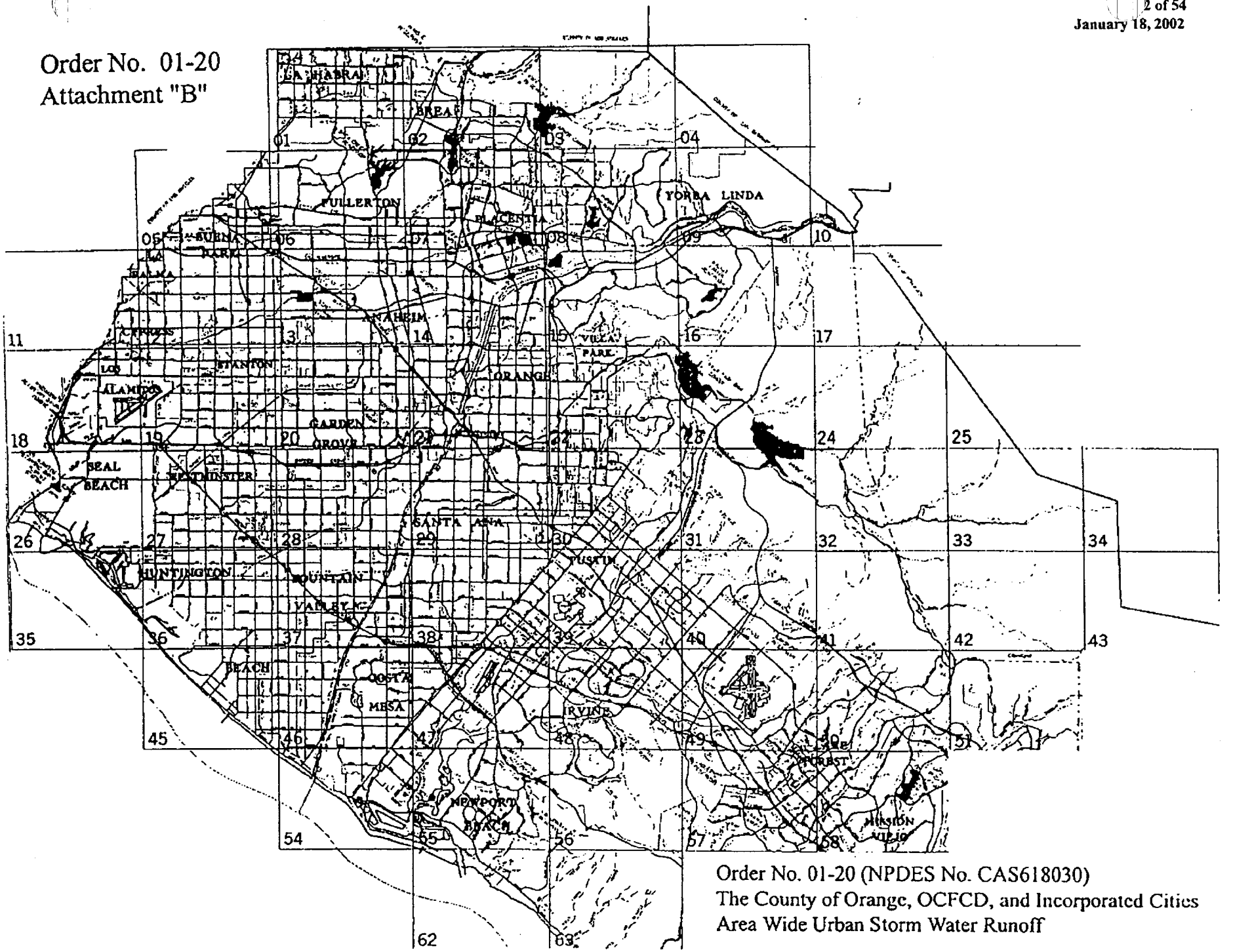
I, Gerard Thibeault, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on January 18, 2002.

_____

Gerard J. Thibeault
Executive Officer


Project Area
REGION 6
REGION 4
REGION 7
REGION 9
1
2
5
SAN BERNARDINO
RIVERSIDE
ORANGE
Upland
Cucamonga
Fontana
SAN BERNARDINO
Ontario
Chino
RIVERSIDE
Corona
ANAHEIM
FULLERTON
GARDEN GROVE
Westminster
SANTA ANA
Tustin
Irvine
Costa Mesa
Orange
Placentia
Yorba Linda
Fountain Valley
PACIFIC
OCEAN
N
April 1973
Revised: July 1976
Revised: August 1986
State of California
REGIONAL WATER QUALITY CONTROL BOARD
Santa Ana Region (8)
SANTA ANA HYDROLOGIC BASIN PLANNING AREA (SA)
Scale in miles
Scale 1:500,000

Order No. 01-20
Attachment "B"



Order No. 01-20 (NPDES No. CAS618030)
The County of Orange, OCFCD, and Incorporated Cities
Area Wide Urban Storm Water Runoff

Order No. R8-2002-0010
Attachment "C"
LIST OF OTHER ENTITIES WITH THE POTENTIAL TO DISCHARGE POLLUTANTS TO THE ORANGE COUNTY STORM WATER SYSTEM

California Department of Transportation (Caltrans), District 12
Southern Pacific Railroad
Atchison, Topeka & Santa Fe Railway Company
Seal Beach Naval Weapons Station
Seal Beach Naval Reserve Center, Los Alamitos
U. S. Marine Corps Air Station, El Toro
National Forest Service

Universities and Colleges

University of California, Irvine
California State University, Fullerton
Chapman College
Coastline College
Cypress College
Fullerton College
Irvine Valley College
Golden West College
Orange Coast College
Rancho Santiago College

School Districts

Anaheim Elementary School District
Anaheim Union High School District
Brea-Olinda Unified School District
Buena Park Joint Union High School District
Centralia Elementary School District
Cypress Elementary School District
Fountain Valley Union High School District
Fullerton Joint Union High School District
Garden Grove Unified School District
Huntington Beach Elementary School District
Huntington Beach Union High School District
Irvine Unified Union High School District
La Habra Joint Union High School District
Los Alamitos Unified School District
Lowell Joint Union High School District
Magnolia Elementary School District
Newport-Mesa Unified School District

Ocean View Union High School District
Orange Unified School District
Placentia Unified School District
Santa Ana Unified School District
Savanna Union High School District
Tustin Unified School District
Westminster Union High School District
Yorba Linda Joint Union High School District

Hospitals

Anaheim General Hospital
Brea Community Hospital
Chapman General Hospital
Children's Hospital of Orange County, Orange
Coastal Communities Hospital, Santa Ana
Fairview Hospital
FHP Hospital, Fountain Valley
Fountain Valley Regional Hospital and Medical Center
Hoag Hospital, Newport Beach
Kaiser Foundation Hospital, Anaheim
Orange County Community Hospital, Buena Park
Pacifica Community Hospital, Huntington Beach
Placentia Linda Community Hospital
Santa Ana Hospital and Medical Center
St. Joseph's Hospital, Orange
U.C. Irvine Medical Center
Vencor Hospital of Orange County, Westminster
Whittier Hospital and Medical Center, Buena Park

Water/Wastewater Agencies

Santa Ana Watershed Project Authority
Irvine Ranch Water District
Los Aliso Water District
El Toro Water District
San Bernardino County Flood Control District
Riverside County Flood Control & Water Conservation District
L.A. County Department of Public Works
County Sanitation Districts of Orange County
Orange County Water District
Metropolitan Water District

California Regional Water Quality Control Board
Santa Ana Region

Monitoring and Reporting Program No. R8-2002-0010
NPDES No. CAS618030

for
the County of Orange, Orange County Flood Control District,
and
Incorporated Cities of Orange County Within the Santa Ana Region
Areawide Urban Storm Water Runoff

I. GENERAL

1. Revisions of the monitoring and reporting program are appropriate to ensure that the permittees are in compliance with requirements and provisions contained in this order. Revisions may be made under the direction of the Executive Officer at any time during the term, and may include a reduction or increase in the number of parameters to be monitored, the frequency of monitoring, or the number and size of samples collected.

2. The Executive Officer is authorized to allow the permittees to participate in statewide, national, or other monitoring programs in lieu of this monitoring program.

3. All sample collection, handling, storage, and analysis shall be in accordance with 40 CFR Part 136 or other methods approved by the Executive Officer.

4. The permittees are authorized to complement their monitoring data with other monitoring sources, provided the monitoring conditions and sources are similar to those in the Santa Ana Watershed.

II. OBJECTIVES

The 1999 Water Quality Monitoring Program prioritized selected monitoring locations in Orange County based on a list of Critical Aquatic Resources and "Warm Spots". This prioritization is based on an analysis of prior years' monitoring data and other available data. It is expected that data collection for the 1999 monitoring program will be completed by July 1, 2003. The permittees also participate in the Regional Monitoring Program for San Diego Creek Nutrient TMDL and other regional monitoring programs, such as those conducted by the Southern California Coastal Water Research Project. The overall goal of these monitoring programs is to develop and support an effective watershed management program. The following are the major objectives:

1. To develop and support an effective municipal urban runoff and non-point source control program.

2. To define water quality status, trends, and pollutants of concern associated with urban storm water and non-storm water discharges and their impact on the beneficial uses of the receiving waters.

3. To characterize pollutants associated with urban storm water and non-storm water discharges and to assess the influence of urban land uses on water quality and the beneficial uses of receiving waters.

4. To identify significant water quality problems related to urban storm water and non-storm water discharges.

5. To identify other sources of pollutants in storm water and non-storm water runoff to the maximum extent possible (e.g., atmospheric deposition, contaminated sediments, other non-point sources, etc.)

6. To identify and prohibit illicit discharges.

7. To identify those waters, which without additional action to control pollution from urban storm water discharges, cannot reasonably be expected to attain or maintain applicable water quality standards required to sustain the beneficial uses in the Basin Plan (TMDL monitoring).

8. To evaluate the effectiveness of existing municipal storm water quality management programs, including an estimate of pollutant reductions achieved by the structural and nonstructural BMPs implemented by the permittees.

9. To evaluate costs and benefits of proposed municipal storm water quality control programs to the stakeholders, including the public.

The Regional Board recognizes that these objectives may not be attainable during this permit period and authorizes the Executive Officer to evaluate and to determine adequate progress toward meeting each objective.

III. MONITORING PROGRAM REQUIREMENTS

1. The permittees shall complete the 1999 Water Quality Monitoring Program.

2. The permittees shall revise, by July 1, 2003, their Water Quality Monitoring Program to include, at a minimum, the following monitoring components or their equivalence:

   A. Mass Emissions Monitoring.

      (1) The principal permittee shall monitor mass emissions in order to: (a) estimate the total mass emissions from the MS4; (b) assess trends in mass emissions over time; and (c) to determine if the MS4 is contributing to exceedances of water quality objectives or beneficial uses, by comparing results to the California Toxics Rule (CTR), Basin Plan, Ocean Plan and/or other relevant standards.

(2) A minimum of seven mass emissions stations shall be placed at locations to include coastal outfalls at Huntington Harbor/Anaheim Bay, the coastline between Huntington Harbor and Newport Bay, Upper/Lower Newport Bay, the Crystal Cove Area of Special Biological Significance (ASBS), and north Orange County where surface flows have not been well-characterized (e.g., Fullerton Creek Channel, Carbon Creek Channel, or Coyote Creek). Additional locations should be based on large discharge volumes, large subwatershed drainage areas, and/or land use distribution.

(3) Autosamplers shall be programmed to collect representative samples from the first storm event and two more storm events during the rainy season. A minimum of three dry-weather samples shall also be collected. Samples from the first rain event each year shall be analyzed for the entire suite of priority pollutants. All samples must be analyzed for metals, pH, TSS, TOC, pesticides/herbicides, and constituents which are known to have contributed to impairment of local receiving waters. Dry weather samples should also include an analysis for oil and grease. Sediments associated with mass emissions should be analyzed for constituents of concern.

B. Estuary/Wetlands Monitoring

(1) The permittees shall monitor the Upper Newport estuary, Talbert Marsh, and Bolsa Chica wetlands areas to determine the effects of storm water and non-storm water runoff associated with increased urbanization on these systems.

(2) Monitoring locations shall include representative areas surrounding channel outfalls and areas away from channel outfalls. Sampling strategies shall be designed to enable the determination of storm water and non-storm water effects on sediment chemistry, toxicity, benthic communities, nutrient status, and spatial extent of sediment fate within the estuarine environment. Additionally, other indicators of biological integrity should be evaluated, such as bird populations or endangered plant/animal species.

C. Water Column Toxicity Monitoring

(1) Analyses for toxicity to freshwater and marine species shall be performed on mass emissions samples to determine the impacts of storm water and non-storm water runoff on toxicity of receiving waters.

(2) *Ceriodaphnia dubia* and *Strongylocentrotus purpuratus* fertilization shall be used to evaluate toxicity on the sample from the first rain event, plus one other wet weather sample and two dry weather samples.

(3) Criteria shall be identified which will trigger the initiation of Toxicity Identification Evaluations (TIEs) and Toxicity Reduction Evaluations (TREs).

D. Bacteriological/Pathogen Monitoring

(1) The permittees shall obtain monitoring data from other entities (such as the Orange County Health Care Agency) and/or monitor representative areas along the Orange County coastline, as well as a minimum of six inland water bodies/channels, for total coliform, fecal coliform, and Enterococcus in order to determine the impacts of storm water and non-storm water runoff on loss of beneficial uses to receiving waters. Inland monitoring stations shall be located to include channels/creeks which are currently impaired for pathogens.

(2) Where possible, data shall be obtained from monitoring efforts of Orange County Health Care Agency, POTWs, and/or other public or private agencies/entities. Monitoring shall be conducted directly by the permittees only to the extent that data gaps exist.

E. Bioassessment

(1) The permittees shall cooperate with the Southern California Coastal Water Research Project (SCCWRP) in efforts to evaluate the biological index approach for Southern California and to design a research project for developing an Index of Biological Integrity (IBI) for the region.

(2) The permittees shall coordinate with SCCWRP and the Regional Board to identify appropriate bioassessment station locations. Station selection and sampling scheme shall be identified in the revised Monitoring Program, and sampling should commence no later than October 2003.

F. Reconnaissance

(1) The permittees shall develop new reconnaissance strategies to identify and prohibit illicit discharges. Where possible, the use of GIS to identify geographic areas with a high density of industries associated with gross pollution (e.g. electroplating industries, auto dismantlers) and/or locations subject to maximum sediment loss (e.g. new development) may be used to determine areas for intensive monitoring efforts. Additionally, the permittees shall coordinate with the Regional Board to develop a comprehensive database to include all enforcement actions for storm water violations and unauthorized, non-storm water discharges, that can then be used to more effectively target reconnaissance efforts.

G. Land Use Correlations

(1) The permittees shall develop and implement strategies for determining the effects of land use on the quality of receiving waters. While it is recognized that a wide range of land uses exist across the region and within each subwatershed, one relationship that may be easily determined is the impact of development on sediment loading within receiving waters, since developed areas contribute relatively little sediment loading compared to areas under construction. Consequently, the permittees shall, at a minimum, analyze the impacts of increasing development and the conversion of agricultural land to the sediment loading of the Upper Newport Bay.

(2) Where possible, data shall be obtained from monitoring efforts of other public or private agencies/entities (e.g., Caltrans, The Irvine Company).

H. TMDL/303(d) Listed Waterbody Monitoring

The Permittees shall continue to participate in the Regional Monitoring Program for the San Diego Creek Nutrient TMDL. In addition, strategies must be revised/developed to evaluate the impacts of storm water or non-storm water runoff on all impairments within the Newport Bay watershed and other 303(d) listed waterbodies. Since the 303(d) listing is dynamic, with new waterbodies and new impairments being identified over time, the permittees shall revise their monitoring plan to incorporate new information as it becomes available.

3. By July 1, 2003, the permittees shall develop and submit for approval of the Executive Officer, their revised Water Quality Monitoring Program, which should yield an integrated watershed-monitoring approach capable, to the maximum extent possible, of achieving the above-stated goals. In order to minimize cost and maximize benefits, it is highly recommended that this program be developed in cooperation with the SCCRWP, the Orange County Health Care Agency, neighboring coastal regions and/or other public or private agencies/entities. The development and implementation of the monitoring program shall be in accordance with the time schedules prescribed by the Executive Officer. At a minimum, the program shall include the following and any requirements developed by the State Board in accordance with Water Code Section 13383.5:

A. Uniform guidelines for quality control, quality assurance, data collection and data analysis that conform to current US EPA standards.

B. A mechanism for the collection, analysis and interpretation of existing data from local, regional or national monitoring programs. These data sources may be utilized to characterize different storm water sources; to determine pollutant generation, transport and fate; to develop a relationship between land use, development size, storm size and the event mean concentration of pollutants; to determine spatial and temporal variances in storm water quality and seasonal and other bias in the collected data; and to identify any unique features of the Santa Ana Watershed. The permittees are encouraged to use data from similar studies, if available.

C. A description of the monitoring program, including:

(1) The number of monitoring stations;

(2) Monitoring locations within flood control channels, bays and estuaries, coastal areas, major outfalls, and other receiving waters;

(3) Environmental indicators (e.g., ecosystem, biological, habitat, chemical, sediment, stream health, etc.) chosen for monitoring;

(4) Parameters selected for field screening and for laboratory work;

(5) Total number of samples to be collected from each station, frequency of sampling during wet and dry weather, short duration or long duration storm events, type of samples (grab, 24-hour composite, etc.), justification for composite versus discrete sampling, type of sampling equipment, quality assurance/quality control procedures followed during sampling and analysis, analysis protocols to be followed (including sample preparation and maximum reporting limits), and identity and qualifications of laboratories performing analyses;

(6) A mechanism for analyzing the collected data and interpreting the results including protocols for handling of non-detects and 'outliers', an evaluation of the effectiveness of the management practices, and need for refinement of the management practices; and,

(7) A description of the responsibilities of all the participants in this program including cost sharing.

IV. REPORTING

1. All progress reports and proposed strategies and plans required by this order shall be signed by the principal permittee, and copies shall be submitted to the Executive Officer of the Regional Board under penalty of perjury.

2. The permittees shall submit an **ANNUAL PROGRESS REPORT** to the Executive Officer of the Regional Board and to the Regional Administrator of the U.S. EPA, Region 9, no later than November 15th, of each year. This progress report may be submitted in a mutually agreeable electronic format. At a minimum, annual progress report shall include the following:

A. A review of the status of program implementation and compliance (or non-compliance) with the schedules contained in this order;

B. An assessment of the effectiveness of control measures established under the illicit discharge elimination program and the Drainage Area Management Plan. The effectiveness may be measured in terms of how successful the program has been in eliminating illicit/illegal discharges and reducing pollutant loads in storm water discharges;

C. An assessment of any storm water management program modifications made to comply with Clean Water Act requirements to reduce the discharge of pollutants to the maximum extent practicable;

D. A summary and analysis of monitoring results from the previous year and any changes to the monitoring program for the following year;

E. A fiscal analysis progress report as described in Section V., Provision, 25., of this order;

F. A draft workplan which describes the proposed implementation of the DAMP for next fiscal year. The workplan shall include clearly defined tasks, responsibilities, and schedules for implementation of the storm water program and each permittee actions for the next fiscal year;

G. Major changes in any previously submitted plans/policies; and

H. An assessment of the permittees compliance status with the Receiving Water Limitations, Section IV of the Order, including any proposed modifications to the DAMP if the Receiving Water Limitations are not fully achieved.

3. The permittees shall be responsible for the submittal to the principal permittee of all required information/materials needed to comply with this order in a timely manner. All such submittals shall be signed by a duly authorized representative of the permittee under penalty of perjury.

(This section intentionally left blank.)

V. REPORTING SCHEDULE

All reports required by this order shall be submitted to the Executive Officer of the Regional Board in accordance with the following schedule:

ITEM	COMPLETION DATE	REPORT DUE DATE
Review planning procedures and CEQA document preparation processes	December 19, 2002	January 2, 2003
Establish Public Education Committee	March 1, 2002	Nov 15, 2002
Review DAMP	July 1, 2003	Nov 15, 2003
Develop public education materials including reporting hot-line and web site	July 1, 2002	Nov 15, 2002
Develop and update construction site, including site information, priority, and inspection information	October 1, 2002	Nov 15, 2003
Establish mechanism to ensure local permits for proposed construction sites and industrial facilities are conditioned upon proof of obtaining coverage under the state General Permit	July 1, 2002	Nov 15, 2002
Develop and distribute model maintenance procedures for public agency activities	July 1, 2002	Nov 15, 2002
Develop and distribute BMP guidance for public agency and contract field operations and maintenance staff	July 1, 2002	Nov 15, 2002
Develop model maintenance procedures for drainage facilities	July 1, 2002	Nov 15, 2002
Evaluate Environmental Performance Program applicability to municipal maintenance contracts, contract for field maintenance operations, and leases	July 1, 2002	Nov 15, 2002
Review and revise current grading/erosion control ordinances	July 1, 2003	Nov 15, 2003

Implementation Agreement Revision	July 1, 2002	Nov 15, 2002
Litter/Trash Control Ordinance review	July 1, 2003	Nov 15, 2003
Additional Debris Control Measures Determination	July 1, 2003	Nov 15, 2003
Complete Public Awareness Survey	July 1, 2002	Nov 15, 2002
Proposed Monitoring Program	July 1, 2003	July 1, 2003
Develop restaurant inspections program, which includes runoff, grease blockage and spill reduction aspects	July 1, 2002	Nov 15, 2002
Legal Authority & Enforcement Strategy Certification	November 1, 2003	Nov 15, 2003
Review effectiveness of ordinances in prohibiting discharges to MS4's as listed in Section 7.	July 1, 2003	Nov 15, 2003
Develop and update an industrial site database, including facility information, priority, and inspection information	July 1, 2003	Nov 15, 2003
Develop and update a commercial site database, including facility information, priority, and inspection information	July 1, 2003	Nov 15, 2003
Propose mechanism to determine effect of septic system failures on storm water quality and a mechanism to address failures	July 1, 2003	Nov 15, 2003
Review oversight of portable toilets to determine need for any revision	July 1, 2003	Nov 15, 2003
BMP Guidance for Restaurants, Automotive Service Centers, and Gasoline Service Stations, developed by Public Education Committee	July 1, 2002	Nov 15, 2002
BMP Guidance for Control of Potential Polluting Activities not otherwise regulated	July 1, 2003	Nov 15, 2003

Review existing BMPs for New Developments and Water Quality Management Plan to determine need for development of Water Quality Protection Plan	July 1, 2003	Nov 15, 2003
Propose study of erosion control BMPs for new development	November 15, 2003	Nov 15, 2003
Incorporate watershed protection principles and policies into the General Plan	July 1, 2004	Nov 15, 2004
Report of Waste Discharge	180 days before permit expires	Dec. 1, 2005
Annual Report/Fiscal Analysis	November 15th of each year	Nov 15
Evaluate Storm Water Management structure and Implementation Agreement	July 1st of each year	Nov 15
Review Environmental Performance Reports	July 1st of each year	Nov 15
Provide training to public agency staff and to contract field operations staff	Annually	Nov 15
Re-evaluate monitoring program priorities based on previous year's data	Annually	Nov 15
Evaluate the DAMP	July 1st of each year	Nov 15
Permittee Committee meetings to discuss permit implementation and regional and state-wide issues	Held at least 6 times each year	Nov 15

Ordered by_____

Gerard J. Thibeault
Executive Officer
January 18, 2002

California Regional Water Quality Control Board
Santa Ana Region
3737 Main Street, Suite 500
Riverside, CA 92501-3348

FACT SHEET

January 18, 2002

ITEM: 2

SUBJECT: **Waste Discharge Requirements for the County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County within the Santa Ana Region, Urban Storm Water Runoff Management Program, Orange County, Order No. R8-2002-0010 (NPDES No. CAS 618030)**

I. INTRODUCTION

The 1972 Clean Water Act (CWA) established the National Pollutant Discharge Elimination System (NPDES) permit program to regulate the discharge of pollutants from point sources to waters of the United States (U.S.). Since then, considerable strides have been made in reducing conventional forms of pollution, such as from sewage treatment plants and industrial facilities, through the implementation of the NPDES program and other federal, state and local programs. The adverse effects of some of the persistent toxic pollutants (DDT, PCB, TBT) were addressed through manufacturing and use restrictions and through cleanup of contaminated sites. On the other hand, pollution from land runoff (including atmospheric deposition, urban, suburban and agricultural) was largely unabated until the 1987 CWA amendments. As a result, diffuse sources, including urban storm water runoff, now contribute a larger portion of many kinds of pollutants than the more thoroughly regulated sewage treatment plants and industrial facilities. The National Urban Runoff Program (NURP) final report to the Congress (U.S. EPA, 1983) concluded that the goals of the CWA could not be achieved without addressing urban runoff discharges. The 1987 CWA amendments established a framework for regulating urban storm water runoff. Pursuant to these amendments, the Santa Ana Regional Water Quality Control Board (Regional Board) began regulating municipal storm water runoff in 1990.

The attached pages contain information concerning an application for renewal of Waste Discharge Requirements and a NPDES permit, which prescribe waste discharge requirements for urban storm water runoff from the cities and unincorporated areas in Orange County within the jurisdiction of the Santa Ana Regional Board. On September 1, 2000, the County of Orange and the Orange County Flood Control District (OCFCD), in cooperation with the cities of Anaheim, Brea, Buena Park, Costa Mesa, Cypress, Fountain Valley, Fullerton, Garden Grove, Huntington Beach, Irvine, Laguna Woods, La Habra, La Palma, Lake Forest, Los Alamitos, Newport Beach, Orange, Placentia, Santa Ana, Seal Beach, Stanton, Tustin, Villa Park, Westminster, and Yorba Linda (hereinafter collectively referred to as permittees or dischargers), submitted NPDES Application No. CAS 618030 (Report of Waste Discharge) for reissuance of their areawide storm water NPDES permit. The permit application was submitted in accordance with the requirements of the previous NPDES permit (Order No. 96-31, NPDES No. CAS618030) which expired on March 1,

2001. Additionally, the permit application follows guidance provided by staff of the State Water Resources Control Board (State Board), the Regional Water Quality Control Boards (Regional Boards), and the United States Environmental Protection Agency (U.S. EPA).

On March 5, 2001, Order No. 96-31, NPDES No. CAS618030, was administratively extended in accordance with 40 CFR Part 122.6 and Title 23, Division 3, Chapter 9, §2235.4 of the California Code of Regulations.

Order No. R8-2002-0010 regulates discharges of urban storm water from the lower Santa Ana watershed to waters of the U.S., which ultimately drain into the Pacific Ocean.

II. REGULATORY BACKGROUND/CLEAN WATER ACT REQUIREMENTS

Urban runoff includes dry and wet weather flows from urbanized areas through a storm water conveyance system. As water flows over streets, parking lots, construction sites, and industrial, commercial, residential and municipal areas, it can intercept pollutants from these areas and transport them to waters of the U.S. If appropriate pollution control measures are not implemented, urban runoff may contain pathogens (bacteria, protozoa, viruses), sediment, trash, fertilizers (nutrients, mostly nitrogen and phosphorus compounds), oxygen-demanding substances (decaying matter), pesticides (DDT, Chlordane, Diazinon, Chlorpyrifos), heavy metals (cadmium, chromium, copper, lead, zinc) and petroleum products (oil & grease, PAHs, petroleum hydrocarbons). If not properly managed and controlled, urbanization can change the stream hydrology and increase pollutant loading to receiving waters. As a watershed undergoes urbanization, pervious surface area decreases, runoff volume and velocity increase, riparian and wetland habitat decrease, the frequency and severity of flooding increase and pollutant loading increases. Most of these impacts are due to human activities that occur during and/or after urbanization. The pollutants and hydrologic changes can cause declines in aquatic resources, toxicity to marine organisms, and impact human health and the environment.

However, properly planned high-density development, with sufficient open space, can reduce urban sprawl and problems associated with sprawl. Urban in-fill development can be an element of smart growth, creating the opportunity to maintain relatively natural open space elsewhere in the area.

The U.S. EPA recognizes urban runoff as the number one source of estuarine pollution in coastal communities[1]. Recent studies[2] conducted in the Southern California area have reported a definite link between storm water runoff from urban areas and pollution in nearshore zones. A number of Orange County beaches were closed during 1999 and 2000 due to microbial contamination. One of the studies conducted to determine the source of this microbial contamination indicated that urban runoff may be one of the sources of this contamination. If not properly controlled, urban runoff could be a significant source of

[1] US EPA, 1999, 40CFR Parts 9, 122, 123, 124, National Pollutant Discharge Elimination System – Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges; Final Rule, 64FR 68727.

[2] Bay, S., Jones, B. H. and Schiff, K, 1999, Study of the Impact of Stormwater Discharge on Santa Monica Bay. Sea Grant Program, University of Southern California; and Haile, R.W., et. al., 1996, An Epidemiological Study of Possible Adverse Health Effects of Swimming in Santa Monica Bay.

pollutants in waters of the U.S. Table 1 includes a list of pollutants, their sources, and some of the adverse environmental consequences mostly resulting from urbanization.

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Table 1[3]. Pollutants/Impacts of Urbanization on Waters of the U.S. (Marine Pollution)

Pollutants	Sources	Effects and Trends
Toxins (e.g., biocides, PCBs, trace metals, heavy metals)	Industrial and municipal wastewaters; runoff from farms, forests, urban areas, and landfills; erosion of contaminated soils and sediments; vessels; atmospheric deposition	Poison and cause disease and reproductive failure; fat-soluble toxins may bioconcentrate, particularly in birds and mammals, and pose human health risks. Inputs into U.S. waters have declined, but remaining inputs and contaminated sediments in urban and industrial areas pose threats to living resources.
Pesticides (e.g., DDT, diazinon, chlorpyrifos)	Urban runoff, agricultural runoff, commercial, industrial, residential, and farm use	Legacy pesticide (DDT, Chlordane, Dieldrin, etc.) use has been banned; still persists in the environment; some of the other pesticide uses are curtailed or restricted.
Biostimulants (organic wastes, plant nutrients)	Sewage and industrial wastes; runoff from farms and urban areas; nitrogen from combustion of fossil fuels	Organic wastes overload bottom habitats and deplete oxygen; nutrient inputs stimulate algal blooms (some harmful), which reduce water clarity, cause loss of seagrass and coral reef, and alter food chains supporting fisheries. While organic waste loadings have decreased, nutrient loadings have increased.
Petroleum products (oil, grease, petroleum hydrocarbons, PAHs)	Urban runoff and atmospheric deposition from land activities; shipping and tanker operations; accidental spills; coastal and offshore oil and gas production activities; natural seepage; PAHs from internal combustion engines	Petroleum hydrocarbons can affect bottom organisms and larvae; spills affect birds, mammals and nearshore marine life. While oil pollution from ships, accidental spills, and production activities has decreased, diffuse inputs from land-based activities have not.
Radioactive isotopes	Atmospheric fallout, industrial and military activities	Few known effects on marine life; bioaccumulation may pose human health risks where contamination is heavy.

[3] Adapted from "Marine Pollution in the United States" prepared for the Pew Oceans Commission, 2001.

Sediments	Erosion from farming, construction activities, forestry, mining, development; river diversions; coastal dredging and mining	Reduce water clarity and change bottom habitats; carry toxins and nutrients; clog fish gills and interfere with respiration in aquatic fauna. Sediment delivery by many rivers has decreased, but sedimentation poses problems in some areas; erosion from coastal development and sea-level rise is a future concern.

Plastics and other debris	Ships, fishing nets, containers, trash, urban runoff	Entangles marine life or is ingested; degrades beaches, wetlands and nearshore habitats. Floatables (from trash) are an aesthetic nuisance and can be a substrate for algae and insect vectors.
Thermal	Cooling water from power plants and industry, urban runoff from impervious	Kills some temperature-sensitive species; displaces others. Generally, less a risk to marine life than thought 20 years ago.
Noise	Vessel propulsion, sonar, seismic prospecting, low-frequency sound used in defense and research	May disturb marine mammals and other organisms that use sound for communication.
Pathogens (bacteria, protozoa, viruses)	Sewage, urban runoff, livestock, wildlife, discharges from boats and cruise ships	Pose health risks to swimmers and consumers of seafood. Sanitation has improved, but standards have been raised.
Alien species	Ships and ballast water, fishery stocking, aquarists	Displace native species, introduce new diseases; growing worldwide problem.

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The Clean Water Act (CWA) prohibits the discharge of any pollutant to navigable waters from a point source unless an NPDES permit authorizes the discharge. Efforts to improve water quality under the NPDES program traditionally and primarily focused on reducing pollutants in discharges of industrial process wastewater and municipal sewage. The 1987 amendments to the CWA required municipal separate storm sewer systems (MS4s) and industrial facilities, including construction sites, to obtain NPDES permits for storm water runoff from their facilities. On November 16, 1990, the United States Environmental Protection Agency (EPA) promulgated the final Phase I storm water regulations. The storm water regulations are contained in 40 CFR Parts 122, 123 and 124.

The areawide NPDES permit for Orange County areas within the Santa Ana Regional Board's jurisdiction is being considered for renewal in accordance with Section 402 (p) of the CWA and all requirements applicable to an NPDES permit issued under the issuing authority's discretionary authority. The requirements included in this order are consistent with the CWA, the federal regulations governing urban storm water discharges, the Water Quality Control Plan for the Santa Ana River Basin (Basin Plan), the California Water Code, and the State Board's Plans and Policies.

The Basin Plan is the basis for the Regional Board's regulatory programs. The Plan was developed and is periodically reviewed and updated in accordance with relevant federal and state law and regulation, including the Clean Water Act and the California Water Code. As required, the Basin Plan designates the beneficial uses of the waters of the Region and specifies water quality objectives intended to protect those uses. (Beneficial uses and water quality objectives, together with an antidegradation policy, comprise federal "water quality standards"). The Basin Plan also specifies an implementation plan, which includes certain discharge prohibitions. In general, the Basin Plan makes no distinctions between wet and dry weather conditions in designating beneficial uses and setting water quality objectives, i.e., the beneficial uses, and correspondingly, the water quality objectives are assumed to apply year-round. (Note: In some cases, beneficial uses for certain surface waters are designated as "I", or intermittent, in recognition of the fact that surface flows (and beneficial uses) may be present only during wet weather.) Most beneficial uses and water quality objectives were established in the 1971, 1975 and 1983 Basin Plans.

Water Code Section 13241 requires that certain factors be considered, at a minimum, when water quality objectives are established. These include economics and the need for developing housing in the Region. (The latter factor was added to the Water Code in 1987).

During this permit development process, the permittees raised an issue regarding compliance with Section 13241 of the California Water Code with respect to water quality objectives for wet weather conditions, specifically the cost of achieving compliance during wet weather conditions and the need for developing housing within the Region and its impact on urban storm water runoff. During the next review of the Basin Plan, staff will recommend that this matter be incorporated on the triennial review list. In the meantime, the provisions of this order will result in reasonable further progress towards the attainment of the existing water quality objectives, in accordance with the discretion in the permitting authority recognized by the United States Court of Appeals for the Ninth Circuit in Defenders of Wildlife v Browner, 191 F.3d 1159, 1164 (9th Cir. 1999).

III. BENEFICIAL USES

Storm water flows that are discharged to municipal storm drain systems in Orange County are tributary to various water bodies (inland surface streams, bays and tidal prisms, ocean waters, and lakes and reservoirs) of the state. The beneficial uses of these water bodies include municipal and domestic supply, agricultural supply, industrial service and process supply, groundwater recharge, navigation, hydropower generation, water contact recreation, non-contact water recreation, commercial and sportfishing, warm freshwater habitat, cold freshwater habitat, preservation of biological habitats of special significance, wildlife habitat, preservation of rare, threatened or endangered species, marine habitat, shellfish harvesting, spawning, reproduction and development of aquatic habitats and estuarine habitat. The ultimate goal of this storm water management program is to protect the beneficial uses of the receiving waters.

IV. PERMITTED AREA

The permitted area is delineated by the Los Angeles County-Orange County boundary line on the northwest, the San Bernardino-Orange County boundary line on the north and northeast, the Riverside County-Orange County boundary line on the east, the Santa Ana Regional Board-San Diego Regional Board boundary line on the southeast, and the Pacific Ocean on the southwest (see Attachment A of the order). The permittees serve a population of approximately 2.8 million, occupying an area of approximately 786 square miles (including unincorporated areas and the limits of 33 cities, 25 of which are within the Santa Ana Regional Board's jurisdiction). The permittees have jurisdiction over, and/or maintenance responsibility for, storm water conveyance systems within Orange County. The County's systems include an estimated 400 miles of storm drain systems. A major portion of the urbanized areas of Orange County drains into water bodies within this Regional Board's jurisdiction. Storm water discharges from urbanized areas consist mainly of surface runoff from residential, commercial, and industrial developments. In addition, there are storm water discharges from agricultural land uses, including farming and animal operations. However, the CWA specifically excludes agricultural discharges from regulation under this program. Other areas of the County not addressed or which are excluded by the storm water regulations and areas not under the jurisdiction of the permittees are excluded from the area requested for coverage under this permit. This includes the following areas and activities:

- Federal lands and state properties, including, but not limited to, military bases, national forests, hospitals, schools, colleges, universities, and highways;
- Native American tribal lands; and
- Utilities and special district properties.

Discharges from the permitted area drain into the Pacific Ocean. The watershed regulated under this order is generally referred to as the Lower Santa Ana River Basin.

V. WATERSHED MANAGEMENT/LOWER SANTA ANA RIVER BASIN

To manage the water resources of the Region efficiently, it is critical to have a holistic approach. The entire storm drain system in Orange County is not controlled by a single entity; the County of Orange, the OCFCD, several cities, Caltrans, U.S. Army Corps of Engineers and a number of other entities own, operate and/or manage the storm drain systems. In addition to the cities, the County and the OCFCD, there are a number of other significant contributors of storm water runoff to these storm drain systems. These include: large institutions such as the State University facilities, schools, hospitals, etc.; federal facilities such as Department of Defense facilities; State agencies such as Caltrans; water and wastewater management agencies such as Orange County Water District, Metropolitan Water District etc.; the National Forest Service; state parks; and entertainment centers such as Disneyland. The quality and quantity of storm water runoff into and out of Orange County also depends upon runoff from San Bernardino and Riverside County areas that are tributary to Orange County. Some of the runoff from Orange County enters systems controlled by other entities, such as the Los Angeles County Flood Control District, which is under the Los Angeles Regional Board's jurisdiction.

Some of these facilities, such as U.S. Marine Corps, Tustin and El Toro Air Stations, Disneyland and Caltrans, are already under individual permits for storm water runoff. The Los Angeles and San Diego Regional Boards have also issued areawide storm water permits for areas within their jurisdiction.

Cooperation and coordination among all the stakeholders are essential for efficient and economical management of the watershed. It is also critical to manage nonpoint sources at a level consistent with the management of urban storm water runoff in a watershed in order to prevent or remedy water quality impairment. Regional Board staff will facilitate coordination of monitoring and management programs among the various stakeholders, where necessary.

An integrated watershed management approach is consistent with the Strategic Plan and Initiatives (June 22, 1995) for the State and Regional Boards. A watershed wide approach is also necessary for implementation of the load and waste load allocations developed under the TMDL process (see Section B, below). The MS4 permittees and all the affected entities should be encouraged to participate in regional or watershed solutions instead of project-specific and fragmented solutions.

The pollutants in urban runoff originate from a multitude of sources and effective control of these pollutants requires a cooperative effort of all the stakeholders and many regulatory agencies. Every stage of urbanization should be considered in developing appropriate urban runoff pollution control methodologies. The program's success depends upon consideration of pollution control techniques during planning, construction and post-construction operations. At each stage, appropriate pollution prevention measures, source control measures and, if necessary, treatment techniques should be considered.

1. SUB-WATERSHEDS AND MAJOR CHALLENGES

The Lower Santa Ana River Watershed can be subdivided into five tributary watersheds:

a. *The San Gabriel River Drainage Area:* Carbon Canyon Creek and Coyote Creek drain into the San Gabriel River. Only a portion of the San Gabriel River is within the Santa Ana Regional Board's jurisdiction. The River empties into the Pacific Ocean at the boundary between two Regional Boards (Regions 4 and 8). Region 4 regulates most of the discharges to the San Gabriel River.

   The Los Angeles Regional Board (Region 4) listed the San Gabriel River as an impaired waterbody on the CWA Section 303(d) list of impaired waters. It is listed for ammonia, toxicity, algae, eutrophication, pH, odors, low dissolved oxygen, trash, lead, arsenic, copper, silver, mercury (tissue), coliform, DDT, PCBs, chlordane, and abnormal fish histology. A trash TMDL for the East Fork of the River was adopted by the Regional Board (Region 4) and approved by the US EPA. A nutrient TMDL is scheduled for adoption in November 2002, a coliform TMDL for May 2003, and a metals TMDL for June 2005.

b. *The Huntington Harbour and Bolsa Bay Drainage Area:* This includes Anaheim Bay, Huntington Habour, Bolsa Bay, and Bolsa Chica Ecological Reserve. A number of flood control channels discharge into this area, including Anaheim-Barber, East Garden Grove-Wintersberg, and Bolsa Chica Channel. The area historically had a number of oil production facilities and an oil-well drilling mud disposal area. There are still some production wells in the area. Certain areas of the Bolsa Chica wetlands have been impacted by the oil production and related activities in the area. The drilling mud disposal area has been cleaned up, and there is a collaborative effort of a number of state, federal, and local agencies and other entities to restore the Bolsa Chica wetlands.

   Anaheim Bay and Huntington Harbour are listed as impaired waterbodies (see Table 2), and TMDLs will be developed to address the pollutants causing the impairment.

c. *The Santa Ana River Drainage Area:* This includes Santa Ana River Reaches 1 and 2, Santiago Creek Reaches 1, 2, 3 and 4, Silverado Creek, Black Star Creek, Talbert Channel, Talbert Marsh and Greenville-Banning Channel. The major problem for the area is microbial contamination of the coastal zone. The initial studies conducted by the Orange County Sanitation District determined that their facilities were probably not the cause of the microbial problems in the nearshore zone. Subsequently, the Executive Officer issued a directive to the County of Orange and the cities of Santa Ana, Costa Mesa, Fountain Valley and Huntington Beach (urban storm water dischargers to this tributary area) under Section 13267 of the Water Code. This directive required the dischargers to provide a plan to identify, characterize and control sources that contributed to the microbial problems in the Huntington Beach area.

The first phase of this study is complete, and the second phase is underway. The first phase of the study indicated that urban runoff, including dry weather flows, may be a contributor to this microbial problem. Some of the dry weather flows from the flood control channels are now being diverted to the sanitary sewer. However, other sources of contamination are also suspected and the second phase of the study is intended to further investigate these sources.

The Executive Officer issued a Cleanup and Abatement Order to the City of Huntington Beach requiring the City to investigate any leaking sanitary sewers in the area and to determine if exfiltration from these sources to storm sewer systems or to ocean waters through other channels was causing or contributing to the microbial problems at Huntington State and City beaches. This investigation is also currently under way.

The Orange County Sanitation District is investigating the impact of its ocean discharge (treated sanitary wastewater) on nearshore microbial problems at Huntington Beach.

It is expected that a combination of requirements included in this order and the programs discussed above will address the urban runoff pollution problems in this sub-watershed.

d. *The Newport Bay Drainage Area:* Tributaries include Bonita Creek, Serrano Creek, Peters Canyon Wash, Hicks Canyon Wash, Bee Canyon Wash, Borrego Canyon Wash, Agua Chinon Wash, Laguna Canyon Wash, Rattlesnake Canyon Wash, Sand Canyon Wash, San Diego Creek Reaches 1 and 2, and San Joaquin Freshwater Marsh.

The Newport Bay watershed has a number of impaired waterbodies listed under Section 303(d) of the CWA (see Section 2, below for details). The impairments are mostly due to nutrients, sediment, pesticides, pathogens and metals. To date, TMDLs have been developed for nutrients, sediment, and fecal coliform bacteria. These TMDLs are being implemented. Recent monitoring data indicate that the target goals for nutrients for the year 2007 are now being met.

Other TMDLs for the Newport Bay watershed are being developed by the Regional Board (for diazinon, chlorpyrifos and selenium) and U.S. EPA (for legacy pesticides and other metals).

The Irvine Ranch Water District (IRWD), which provides sewage collection and treatment services for most areas in this watershed, has been also accepting dry weather flows from some of the storm sewer systems. Recently, IRWD proposed to construct a number of water quality treatment wetlands for treating urban storm water runoff. These treatment wetlands would be strategically located to capture and treat flows from different portions of the watershed. The IRWD is also exploring the possibility of sponsoring legislation that would authorize the District to collect storm water fees. These treatment wetlands are expected to remove sediment and nutrients from urban runoff but may be

less efficient in removing pathogens and toxics (metals, pesticides, etc.). It is anticipated that a combination of other best management practices and these treatment wetlands will help to control the discharge of pollutants in urban runoff.

e. *Irvine Coast and Newport Coast Areas of Special Biological Significance (ASBSs)* The Ocean Plan has 35 designated areas of special biological significance throughout the State; two of these ASBSs are within the Santa Ana Region, Irvine Coast Areas of Special Biological Significance, Newport Coast Areas of Special Biological Significance. The ASBSs require protection of species or biological communities to the extent that alteration of natural water quality is undesirable. The Crystal Cove area, which is within the Irvine Coast ASBS, is currently experiencing increased urban runoff from new developments in the area. The Ocean Plan contains a prohibition on discharges of wastes to ASBS. Regional Board staff identified a number of dischargers potentially violating or threatening to violate this Ocean Plan discharge prohibition in the Crystal Cove area. These dischargers included The Irvine Company, California Department of Transportation, and the California Department of Parks and Recreation. On November 16, 2000, the Regional Board adopted Cease and Desist Order No. 00-87 requiring these dischargers to cease and desist from any violations of the waste discharge prohibition. All future waste discharges to the ASBS governed by the prohibition in the Ocean Plan are prohibited and a time schedule is provided in the Cease and Desist order to eliminate the existing waste discharges.

2. CWA SECTION 303(d) LIST AND TMDLs:

The 1998 water quality assessment conducted by the Regional Board identified a number of waterbodies within the Region as impaired waterbodies, under Section 303(d) of the CWA. These are waterbodies where the designated beneficial uses are not met and/or the water quality objectives are being violated. These waterbodies were placed on the CWA Section 3030(d) list of impaired waters. The impaired waterbodies in Orange County within the Santa Ana Regional Board's jurisdiction are listed in Table 2.

Federal regulations require that a total maximum daily load (TMDL) be established for each 303(d) listed waterbody for each of the pollutants causing impairment. The TMDL is the total amount of the problem pollutant that can be discharged while water quality standards in the receiving water are attained, i.e., water quality objectives are met and the beneficial uses are protected. It is the sum of the individual wasteload allocations (WLA) for point source inputs, load allocations (LA) for non-point source inputs and natural background, with a margin of safety. The TMDLs are the basis for limitations established in waste discharge requirements. TMDLs have been developed for sediment and nutrients for San Diego Creek and Newport Bay and for fecal coliform bacteria in Newport Bay. The stakeholders in this watershed are collaborating in the development and implementation of the TMDLs. The Regional Board's Executive Officer has issued requirements for the submittal and implementation by the responsible parties of plans and schedules to address the TMDL requirements. To avoid any duplicative efforts, this permit does not include any further

implementation requirements based on TMDLs. However, this permit may be reopened to include TMDL implementation, if other implementation methodologies are not effective.

Table 2. Clean Water Act Section 303(d) Listed Waterbodies

Water Body	Hydro Unit	Pollutant Stressor	Source	Priority	Size Affected	Unit	TMDL End Date
Anaheim Bay	801.110	Metals	Urban Runoff/Storm Sewers, Unknown Nonpoint Source	Medium	180	Acres	0111
		Pesticides	Unknown Nonpoint Source	Medium	180	Acres	0111
Huntington Harbour	801.110	Metals	Urban Runoff/Storm Sewers, Boatyards	Medium	150	Acres	0111
		Pathogens	Urban Runoff/ Storm Sewers	Medium	150	Acres	0111
		Pesticides	Unknown Nonpoint Source	Medium	150	Acres	0111

Newport Bay, Lower	801.110	Metals	Urban Runoff/Storm Sewers, Contaminated Sediments, Boatyards	High	700	Acres	0107
		Nutrients	Agriculture, Urban Runoff/Storm Sewers	High	700	Acres	0198
		Pathogens	Urban Runoff/Storm Sewers	High	700	Acres	0100
		Pesticides	Agriculture, Contaminated Sediments	High	700	Acres	0102
		Priority Organics	Contaminated Sediments, Unknown Nonpoint Source	High	700	Acres	0102
Upper Newport Bay Ecological Reserve	801.110	Metals	Urban Runoff/Storm Sewers	High	752	Acres	0102
		Nutrients	Agriculture, Urban Runoff/Storm Sewers, Groundwater Loadings	High	752	Acres	0198
		Pathogens	Urban Runoff/Storm Sewers	High	752	Acres	0100
		Pesticides	Agriculture, Unknown Nonpoint Source	High	752	Acres	0102
		Sedimentation/ Siltation	Agriculture, Construction/Land Development, Channel Erosion, Erosion/Siltation	High	752	Acres	0198
San Diego Creek, Reach 1	801.110	Metals	Unknown Nonpoint Source	High	6	Miles	0102
		Nutrients	Agriculture, Urban Runoff/Storm Sewer, Groundwater Loadings	High	6	Miles	0198
		Pesticides	Unknown Nonpoint Source	High	6	Miles	0102
		Sedimentation/ Siltation	Agriculture, Construction/Land Development, Channel Erosion, Erosion/Siltation	High	6	Miles	0198

San Diego Creek Reach 2	801.110	Metals	Urban Runoff/Storm Sewer	High	6	Miles	0102
		Nutrients	Agriculture, Urban Runoff/Storm Sewer, Groundwater Loadings	High	6	Miles	0198
		Sedimentation/ Siltation	Agriculture, Construction/Land Development, Channel Erosion, Erosion/Siltation	High	6	Miles	0198
		Unknown Toxicity	Unknown Nonpoint Source	High	6	Miles	0102
Santiago Creek R4	801.120	Salinity/ TDS/ Chlorides	Source Unknown	Low	2	Miles	0111
Silverado Creek	801.120	Pathogens	Unknown Nonpoint Source	Low	2	Miles	0111
		Salinity/ TDS/ Chlorides	Unknown Nonpoint Source	Low	2	Miles	0111

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VI. FIRST AND SECOND TERM PERMITS: STORM WATER POLLUTION CONTROL PROGRAMS/POLICIES

Prior to EPA's promulgation of the final storm water regulations, the counties of Orange, Riverside and San Bernardino applied for areawide NPDES permits for storm water runoff. On July 13, 1990, the Regional Board issued Order No. 90-71 to the permittees (first term permit). In 1996, the Board adopted Order No. 96-31 (second term permit). First and second term permits included the following requirements as outlined in the storm water regulations:

1. Prohibited non-storm water discharges to the MS4s, with certain exceptions.
2. Required the municipalities to develop and implement a drainage area management plan (DAMP) to reduce pollutants in urban storm water runoff to the maximum extent practicable (MEP[4]).
3. Required the discharges from the MS4s to meet water quality standards in receiving waters.
4. Required the municipalities to identify and eliminate illicit connections and illegal discharges to the MS4s.
5. Required the municipalities to establish legal authority to enforce storm water regulations.
6. Required monitoring of dry weather flows, storm flows, and receiving water quality, and required program assessment.

The following programs and policies have been implemented or are being implemented by the permittees. During the first term permit, the permittees developed a Drainage Area Management Plan (1993 DAMP) which was approved by the Executive Officer of the Regional Board on April 29, 1994. The 1993 DAMP included a number of best management practices (BMPs) and a very extensive public education program. The monitoring program for the first term permit included 89 monitoring stations within streams and flood control channels and 21 stations within the bays, estuaries and the ocean. The findings and conclusions from these monitoring stations and monitoring programs of other municipal permittees (Riverside and San Bernardino Counties and others) have been used to identify problem areas and to re-evaluate the monitoring program and the effectiveness of the BMPs. The future direction of some of these program elements will depend upon the results of the ongoing studies and a holistic approach to watershed management.

Other elements of the storm water management program included identification and elimination of illegal/illicit discharges and establishment of adequate legal authority to control pollutants in storm water discharges. The permittees have completed a survey of their storm drain systems to identify illegal/illicit connections and have adopted appropriate ordinances to establish legal authority. Some of the more specific achievements during the first and second term permits are as follows:

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[4] Maximum Extent Practicable (MEP) means to the maximum extent feasible, taking into account equitable considerations of synergistic, additive, and competing factors, including but not limited to, gravity of the problem, technical feasibility, fiscal feasibility, public health risks, societal concerns, and social benefits.

1. *Interagency Agreements and Coordination*: Established a program management structure through an Interagency Implementation Agreement. Participated in regional monitoring programs and focused special studies/research programs. Worked with the County Sanitation Districts, Health Care Agency, Integrated Waste Management Agency, and the Water Districts to provide a consistent urban storm water pollution control message to the public. Worked with Caltrans, other transportation agencies, the Storm Water Quality Task-Force, and others to further study and understand urban runoff problems and control measures.
2. *Ordinances, Plans and Policies:* Adopted a Model Water Quality Ordinance and Enforcement Consistency Guide; prepared a Water Pollution Enforcement Implementation Plan, Public Agency Activity BMP guideline, a Public Pesticide and Fertilizer Use guideline, Criteria for MS4 Inspections, and a Water Quality Monitoring Plan; and established a Technical Advisory Committee for overall program development and implementation.
3. *Program Review*: A number of existing programs were reviewed to determine their effectiveness in combating urban pollution and to recommend alternatives and or improvements, including litter control measures, street sweeping frequencies and methods, public agency activities and facilities, illegal and illicit connections to the MS4 systems, and existing monitoring programs.
4. *Public Education:* A number of steps were taken to educate the public, businesses, industries, and commercial establishments regarding their role in urban runoff pollution controls. The appropriate industrial dischargers were notified of the storm water regulatory requirements. For a number of unregulated activities, BMP guidance was developed (mobile detailing, automotive service centers, restaurants, pool maintenance). Finally, a countywide hotline was established for reporting any suspected water quality problems.
5. *Public Agency Training:* Training was provided to public agency employees on how to implement New Development Guidelines and Public Works BMPs, how to conduct investigations of reported water quality problems and how to conduct inspections of industrial facilities and public work projects. The municipal planners were trained to recognize water quality related problems in proposed developments.
6. *Related Activities:* Flood control channels were stabilized, sediment basins were constructed, and debris booms were installed; illegal connections were eliminated and illicit connections to the MS4s were documented and/or permitted.

VII. FIRST AND SECOND TERM PERMITS - WATER QUALITY IMPROVEMENTS

An accurate and quantifiable measurement of the impact of the above stated storm water management programs is difficult for a variety of reasons, such as the variability in chemical water quality data, the incremental nature of BMP implementation, lack of baseline monitoring data, and the existence of some of the programs and policies prior to initiation of formal storm water management programs. There are generally two accepted methodologies for assessing water quality improvements: (1) conventional monitoring such as chemical-specific water quality monitoring; and (2) non-conventional monitoring such as monitoring of the amount of household hazardous waste collected and disposed off at

appropriate disposal sites, amount of used oil collected, debris removed by the debris boom, etc.

The water quality monitoring data collected during the first and second term permits did not indicate any discernible trends or significant changes. However, the non-conventional monitoring data indicate that other programs and policies have been very effective in keeping a significant quantity of wastes from being discharged into waters of the U.S.

During the second term permit, there was an increased focus on watershed management initiatives and coordination among the municipal permittees in Orange, Riverside and San Bernardino Counties. These efforts resulted in a number of regional monitoring programs and other coordinated program and policy developments.

It is anticipated that with continued implementation of the revised DAMP and other requirements specified in this order, the goals and objectives of the storm water regulations will be met, including protection of the beneficial uses of all receiving waters.

VIII. FUTURE DIRECTION/2000 DAMP

The NPDES permit renewal application included an updated DAMP (2000 DAMP) that includes programs and policies the permittees are proposing to implement during the third term permit. The 2000 DAMP is the principal guidance document for urban storm water management programs in Orange County and includes the following major components:

1. Continues to provide a framework for the program management activities and plan development.
2. Continues to provide the legal authority to control discharges to the MS4s.
3. Improves current BMPs to achieve further reduction in pollutant loading to the MS4s.
4. Includes programs and policies to increase public education processes and to seek public support for urban storm water pollution prevention BMPs.
5. Increases requirements for controls on new developments and significant redevelopments.
6. Continues to ensure that construction sites implement appropriate pollution control measures.
7. Continues to ensure that industrial sites are in compliance with storm water regulations.
8. Continues to include programs and policies to eliminate illegal discharges and illicit connections to the MS4s.
9. Continues to include monitoring of urban runoff.
10. Includes provisions for any special focus studies and/or control measures.

A combination of these programs and policies and the requirements specified in this order should ensure control of pollutants in storm water runoff from facilities owned and/or controlled by the permittees.

IX. PERMIT REQUIREMENTS

The legislative history of storm water statutes (1987 CWA Amendments), U.S. EPA regulations (40CFR Parts 122, 123, and 124), and clarifications issued by the State Water Resources Control Board (State Board Orders No. WQ 91-03 and WQ 92-04) indicate that a non-traditional NPDES permitting strategy was anticipated for regulating urban storm water runoff. Due to the economic and technical infeasibility of full-scale end-of-pipe treatments and the complexity of urban storm water runoff quality and quantity, MS4 permits generally include narrative requirements for the implementation of BMPs in place of numeric effluent limits.

The requirements included in this order are meant to specify those management practices, control techniques and system design and engineering methods that will result in maximum extent practicable protection of the beneficial uses of the receiving waters. The State Board (Orders No. WQ 98-01 and WQ 99-05) concluded that MS4s must meet the technology-based maximum extent practicable (MEP) standard and water quality standards (water quality objectives and beneficial uses). The U.S. Court of Appeals for the Ninth Circuit subsequently held that strict compliance with water quality standards in MS4 permits is at the discretion of the local permitting agency. Any requirements included in the order that are more stringent than the federal storm water regulations are in accordance with the CWA Section 402(p)(3)(iii), and the California Water Code Section 13377 and are consistent with the Regional Board's interpretation of the requisite MEP standard.

The Report of Waste Discharge (ROWD) included a discussion of the current status of Orange County's urban storm water management program and the proposed programs and policies for the next five years (third term permit). The order incorporates these documents and the performance commitments made in the ROWD.

This order recognizes the significant progress made by the permittees during the first and second term permits in implementing the storm water regulations. The permit also recognizes regional and innovative solutions to such a complex problem. For these reasons, the order is less prescriptive compared to some of the MS4 NPDES permits for urban runoff issued by other Regional Boards. However, it should achieve the same or better water quality benefits because of the programs and policies already being implemented or proposed for implementation, including regional and watershed wide solutions.

The major requirements include: (1) Discharge prohibitions; (2) Receiving water limitations; (3) Prohibition on illicit connections and illegal discharges; (4) Public and business education; (5) Adequate legal authority; (6) Programs and policies for municipal facilities and activities; (7) Inspection Activities by the municipalities; (8) New development/re-development requirements; (9) Waste load allocations for nutrients, sediment, and fecal coliform bacteria; and, (10) Monitoring and reporting requirements.

These programs and policies are intended to improve urban storm water quality and protect the beneficial uses of receiving waters of the region.

1. DISCHARGE PROHIBITIONS

   In accordance with CWA Section 402(p)(3)(B)(ii), this order prohibits the discharge of non-storm water to the MS4s, with a few exceptions. The specified exceptions are consistent with 40 CFR 122.26(d)(2)(iv)(B)(1). If the permittees or the

Executive Officer determines that any of the exempted non-storm water discharges contain pollutants, a separate NPDES permit or coverage under the Regional Board's De Minimis permit will be required.

2. RECEIVING WATER LIMITATIONS

Receiving water limitations are included to ensure that discharges from MS4 systems do not cause or contribute to violations of applicable water quality standards in receiving waters. The compliance strategy for receiving water limitations is consistent with the U.S. EPA and State Board guidance and recognizes the complexity of storm water management.

This order requires the permittees to meet water quality standards in receiving waters in accordance with US EPA requirements as specified in State Board Order No. WQ 99-05. If water quality standards are not met by implementation of current BMPs, the permittees are required to re-evaluate the programs and policies and to propose additional BMPs. Compliance determination will be based on this iterative BMP implementation/compliance evaluation process.

3. ILLEGAL DISCHARGES AND ILLICIT CONNECTIONS TO MS4s

The permittees have completed their survey of the MS4 systems and eliminated or permitted all identified illicit connections. The permittees have also established a program to address illegal discharges and a mechanism to respond to spills and leaks and other incidents of discharges to the MS4s. The permittees are required to continue these programs to ensure that the discharges from MS4s do not become a source of pollutants in receiving waters.

4. PUBLIC AND BUSINESS EDUCATION OUTREACH PROGRAM

Public outreach is an important element of the overall urban pollution prevention program. The permittees have committed to implement a strategic and comprehensive public education program to maintain the integrity of the receiving waters and their ability to sustain beneficial uses. The principal permittee has taken the lead role in the outreach program and has targeted various groups including businesses, industry, development, utilities, environmental groups, institutions, homeowners, school children, and the general public. The permittees have developed a number of educational materials, established a storm water pollution prevention hotline, started an advertising and educational campaign and distribute public education materials at a number of public events. The permittees are required to continue these efforts and to expand public participation and education programs.

5. LEGAL AUTHORITY

During the first two permit cycles, each permittee adopted a number of ordinances, municipal codes, and other regulations to establish legal authority to control discharges to the MS4s and to enforce these regulations as specified in 40 CFR 122.26(d)(2)(I)(B, C, E, and F). The permittees are required to enforce these ordinances and to take enforcement actions against violators (40 CFR 122.26(d)(2)(iv)(A-D)). The enforcement activities undertaken by a majority of the permittees have consisted primarily of Notices of Violation, which act to educate the public on the environmental consequences of illegal discharges. In the case of the County, additional action has sometimes included recovery of investigation and

clean-up costs from a responsible party. In the event of egregious or repeated violations, the option exists for a referral to the County District Attorney for possible prosecution. In order to eliminate unauthorized, non-storm water discharges, reduce the amount of pollutants commingling with storm water runoff and thereby protect water quality, an additional level of enforcement is required between Notices of Violation and District Attorney referrals. Therefore, by November 15, 2003, the permittees are required to establish the authority and resources to administer either civil or criminal fines and/or penalties for violations of their local water quality ordinances (and the Federal Clean Water Act). The progress in establishing this program must be fully documented in the annual reports submitted by the permittees and the number, nature and amount of fines and/or penalties levied must be reported, beginning with the 2003/2004 annual report.

6. PUBLIC FACILITIES AND ACTIVITIES

Education of municipal planning, inspection, and maintenance staff is critical to ensure that municipal facilities and activities do not cause or contribute to an exceedance of receiving water quality standards. The second term permit required the permittees to prepare an Environmental Performance Report to address public agency facilities and activities that are not regulated under the State's General Industrial Activities Storm Water Permit. It also required the permittees to report on an annual basis the actions taken to eliminate the discharge of pollutants from public agency activities and facilities. The permittees are required to inspect and maintain drainage facilities free of waste materials to control pollutants in storm water runoff flowing through these systems. This order requires the permittees to re-evaluate their facilities and activities on an annual basis to see if additional BMPs are needed to ensure water quality protection.

7. MUNICIPAL INSPECTION PROGRAM

Inspections by the municipalities, of construction, industrial, and commercial activities within their jurisdiction will be conducted, in order to control the loading of pollutants entering the MS4 system. The municipalities will inventory companies and sites in the above categories; prioritize those companies and sites with respect to their potential for discharge of pollutants in runoff and their proximity to sensitive receiving waters; and perform regular inspections to insure compliance with local ordinances. While initial observations of non-compliance may result in 'educational' type enforcement, repeated non-compliance will result in more disciplinary forms of enforcement, such as, monetary penalties, stop work orders or permit revocation.

8. NEW DEVELOPMENT

During the second term permit, the permittees developed new development guidelines. The permittees are required to implement these guidelines. Additionally, this order requires the permittees to work towards the goal of restoring and preserving the natural hydrologic cycles in approving urban developments. To accomplish this goal, the permittees have the option of using a combination of methodologies. The permittees/project proponents may propose BMPs based on a watershed approach, establish a storm water pollution prevention fund for such BMPs, or any other innovative and proven alternatives to address storm water pollution. If a set of measures, acceptable to the Executive Officer, is not developed

and approved by October 1, 2003, the permittees are required to use the numeric sizing criteria specified in this order. The numeric criteria are identical to the ones used by the San Diego Regional Board in its MS4 permit for permittees within the San Diego County area (Order No. 2001-01).

9. SEPTIC SYSTEM FAILURES AND PORTABLE TOILET DISCHARGES

A number of beach closures in Orange County have been due to spills, overflows, and leaks from sanitary sewer lines. To address these concerns, a set of separate waste discharge requirements for local sanitary sewer agencies is being prepared by the Regional Board. Failing septic systems and improper use of portable toilets have also been linked to microbial contamination of urban runoff. The permittees shall identify, with the appropriate local agency, a mechanism to determine if failure of these septic systems are causing or contributing to urban storm water pollution problems in their jurisdictions. The permittees shall also review their local oversight program for the placement and maintenance of portable toilets to determine the need for any revision.

10. MONITORING REQUIREMENTS

During the first term permit and part of the second term permit, the permittees conducted extensive monitoring of the storm water flows, receiving water quality and sediment quality. These early programs focused on identifying pollutants, estimating pollutant loads, tracking compliance with water quality objectives, and identifying sources of pollutants. The Orange County monitoring program, like other monitoring programs nationwide, has established that there is a high degree of uncertainty in the quality of storm water runoff and that there are significant variations in the quality of urban runoff spatially and temporally. However, most of the monitoring programs to date have indicated that there a number of pollutants in urban storm water runoff. Only in a few cases has a definite link between pollutants in urban runoff and beneficial use impairment been established.

In 1999, the permittees re-evaluated their monitoring program and proposed a revised monitoring program. The goals of the 1999 Water Quality Monitoring Program are:

a. To determine the role of urban runoff in beneficial use impairment;

b. To collect technical information to develop an effective urban storm water management plan; and

c. To determine the effectiveness of a number of BMPs, also as an aid to the overall urban storm water management plan.

To accomplish these goals, the monitoring program focuses on three areas:

a. Areas where constituent concentrations are substantially above system-wide averages. These areas are referred to as "warm spots" and the designation is based on monitoring data from prior years.

b. Areas of Critical Aquatic Resources (sites with important aquatic resources).

c. Sub-watersheds where certain BMPs have been installed to study their effectiveness.

To accomplish these goals, it is anticipated that at least five years worth of monitoring data will be required (1999-2003).

In addition, the monitoring program will continue the Reconnaissance and Source Identification component that targets areas that are known to exhibit unusually high levels of storm water pollutants.

The permittees also participate in a number of other regional monitoring programs such as those conducted by the Southern California Coastal Water Research Project and the California Regional Marine Monitoring Program.

The permittees are encouraged to continue their participation in regional and watershed-wide monitoring programs. By July 1, 2003, the permittees are required to re-evaluate their Water Quality Monitoring Program and submit a revised plan for approval. The revised plan shall include the following monitoring elements: Mass Emissions, Estuary/Wetlands, Water Column Toxicity, Bacteriological/Pathogen, Bioassessment, Reconnaissance, Land Use Correlation, and TMDL/303(d) Listed Waterbodies.

X. WATER QUALITY BENEFITS/COST ANALYSIS/FISCAL ANALYSIS

There are direct and indirect benefits from clean beaches, clean water, and a clean environment. It is difficult to assign a dollar value to the benefits the public derives from fishable and swimmable waters. In 1972, at the start of the NPDES program, only 1/3 of the U.S. waters were swimmable and fishable. In 2001, 2/3 of the U.S. waters meets these criteria. In the 1995, *Money* magazine survey of the "Best Places to Live", clean water and air ranked as the most important factors in choosing a place to live. Thus, environmental quality has a definite link to property values. Clean beaches and other water recreational facilities also attract tourists. It is estimated that on average, an out-of-state visitor spends approximately $100.00 per day. Huntington Beach's 8.5-mile shoreline attracts 10 million visitors a year[5]. During the summer of 1999 and 2000 when the beaches were closed to water contact recreation, the beach communities reported multi-million-dollar losses in tourist revenues.

The true magnitude of the urban runoff problem is still elusive and any reliable cost estimate for cleaning up urban runoff would be premature. For urban storm water runoff, end-of-pipe treatments are cost prohibitive and are not generally considered as a technologically feasible option. Over the last decade, the permittees have attempted to define the problem and implemented best management practices to combat the problem. The costs incurred by the permittees in implementing these programs and policies can be divided into three broad categories (the costs indicated below are for the entire Orange County storm water program):

1. Shared costs: These are costs that fund activities performed mostly by the principal permittee under the Implementation Agreement. These activities include overall storm water program coordination; intergovernmental agreements; representation at the Storm Water Quality Task Force, Regional Board/State Board meetings and other public forums; preparation and submittal of compliance reports and other

[5] Los Angeles Times, May 9, 2001

reports required under the NPDES permits and Water Code Section 13267, budget and other program documentation; coordination of consultant studies, co-permittee meetings; and training seminars. The overall costs increased from $0.81M in 1996/97 to $0.94M in 1999/00.

2. Individual Costs for DAMP Implementation: These are costs incurred by each permittee for implementing the BMPs (drainage facility inspections for illicit connections, drain inlet/catchbasin stenciling, public education, etc.) included in the DAMP. A number of programs and policies for non-point and storm water pollution controls existed prior to the urban storm water runoff NPDES program. However, the DAMP that was developed and implemented in response to the urban storm water runoff NPDES program required additional programs and policies for pollution control. These costs are attributable to DAMP implementation. These costs increased from $2.6M in 1996/97 to $6.9M in 1999/00.

3. Individual Costs of Pre-Existing Programs: These are costs incurred by each permittee for water pollution control measures that were already in existence prior to the urban storm water runoff NPDES program. These programs included recycling, litter control, street sweeping, drainage facility maintenance, and emergency spill response. The overall costs for these programs increased from $48M in 1996/97 to $79M in 1999/00.

In addition to these expenditures, volunteer programs (such as the "Beach Cleanup Day", "Pride Days", "Coastal Cleanup Day", etc.) also contributed to the urban runoff pollution control efforts.

The permittees identified the following funding sources (1999/00):

FUNDING SOURCE	*PERCENTAGE*
General Funds	66%
Gas Taxes	9%
Sewer/Storm Drain Maintenance Fee	7%
Sanitation Fees	5%
Benefit Assessment	3%
Special District Funds	1%
Other Sources	9%

XI. ANTIDEGRADATION ANALYSIS

The Regional Board has considered whether a complete antidegradation analysis, pursuant to 40 CFR 131.12 and State Board Resolution No. 68-16, is required for these storm water discharges. The Regional Board finds that the pollutant loading rates to the receiving waters will be reduced with the implementation of the requirements in this order. As a result, the quality of storm water discharges and receiving waters will be improved. Since this order will not result in a lowering of water quality, a complete antidegradation analysis is not necessary, consistent with the federal and state antidegradation requirements.

XII. PUBLIC WORKSHOP

The Regional Board recognizes the significance of Orange County's Storm Water/Urban Runoff Management Program and will conduct, participate, and/or assist with any workshop during the term of this order to promote and discuss the progress of the storm water management program. The details of the workshop will be posted on the Regional Board's website, published in local newspapers and mailed to interested parties. Persons wishing to be included in the mailing list for any of the items related to this order may register their e-mail address and/or mailing address with the Regional Board office at the address given below.

XIII. PUBLIC HEARING

The Regional Board opened a public hearing regarding the proposed waste discharge requirements on Wednesday, December 19, 2001 at 9:00 a.m. at the City Council Chambers, City of Santa Ana. The public hearing was continued on Friday, January 18, 2002 at 9:00 a.m. at the City Council Chambers, City of Santa Ana, at which time Order No. R8-2002-0010 was adopted.

XIV. INFORMATION AND COPYING

Persons wishing further information may write to the above address or call Aaron Buck at (909) 782-4906. Copies of the application, proposed waste discharge requirements, and other documents (other than those which the Executive Officer maintains as confidential) are available at the Regional Board office for inspection and copying by appointment scheduled between the hours of 8:30 a.m. and 4:00 p.m., Monday through Friday (excluding holidays).

XV. REGISTER OF INTERESTED PERSONS

Any person interested in a particular application or group of applications may leave his/her e-mail and/or mailing address and phone number as part of the file for an application. Copies of tentative waste discharge requirements will be mailed to all interested parties.

In addition to the permittees, comments were solicited from the following agencies and/or persons:

U. S. Environmental Protection Agency – Terry Oda / Eugene Bromley (W-5-1)
U.S. Army District, Los Angeles, Corps of Engineers - Permits Section
NOAA, National Marine Fisheries Service
U.S. Fish and Wildlife Service - Carlsbad
State Water Resources Control Board - Ted Cobb, Office of the Chief Counsel
State Water Resources Control Board – John Youngerman/Bruce Fujimoto, Division of Water Quality
State Department of Water Resources - Glendale
California Regional Water Quality Control Board, North Coast Region (1) – John Short
California Regional Water Quality Control Board, San Francisco Bay Region (2) – Dale Bowyer
California Regional Water Quality Control Board, Central Coast Region (3) – Jennifer Bitting
California Regional Water Quality Control Board, Los Angeles Region (4) – Wendy Phillips
California Regional Water Quality Control Board, Central Valley Region (5S) – George D. Day/Dani Berchtold
California Regional Water Quality Control Board, Central Valley Region (5R), Redding - Carole Crowe
California Regional Water Quality Control Board, Central Valley Region (5F), Fresno – Jarma Bennett
California Regional Water Quality Control Board, Lahontan Region (6SLT), South Lake Tahoe – Mary Fiore-Wagner
California Regional Water Quality Control Board, Lahontan Region (6V), Victorville – Gene Rodash
California Regional Water Quality Control Board, Colorado River Basin Region (7) – Abdi Haile/Pat Garcia
California Regional Water Quality Control Board, San Diego Region (9) – Bob Morris/Dave Gibson
State Department of Fish and Game - Long Beach
State Department of Health Services - Santa Ana
State Department of Parks and Recreation – Don Ito
Orange County Health Care Agency – Larry Honeybourne
South Coast Air Quality Management District, Diamond Bar -
Caltrans, District 12, Santa Ana – Grace Pina-Garrett
Southern Pacific Railroad
Atchison, Topeka & Santa Fe Railway Company
Seal Beach Naval Weapons Station
Seal Beach Naval Reserve Center, Los Alamitos
U. S. Marine Corps Air Station, El Toro -
National Forest Service
URS/Greiner - Bob Collacott
The Irvine Company - Sat Tamaribuchi
Building Industry Association – Tim Piasky/David Smith
Latham & Watkins – Paul Singarella

Best, Best, and Krieger – Anne Thomas
Southern California Association of Governments, Los Angeles - Tabi Hiwot

Universities and Colleges (Chancellor)
University of California, Irvine
California State University, Fullerton
Chapman College
Coastline College
Cypress College
Fullerton College
Irvine Valley College
Golden West College
Orange Coast College
Rancho Santiago College

School Districts (Superintendent)
Anaheim Elementary School District
Anaheim Union High School District
Brea-Olinda Unified School District
Buena Park Joint Union High School District
Centralia Elementary School District
Cypress Elementary School District
Fountain Valley Union High School District
Fullerton Elementary School District
Fullerton Joint Union High School District
Garden Grove Unified School District
Huntington Beach Elementary School District
Huntington Beach Union High School District
Irvine Unified Union High School District
La Habra Joint Union High School District
Los Alamitos Unified School District
Lowell Joint Union High School District
Magnolia Elementary School District
Newport-Mesa Unified School District
Ocean View Union High School District
Orange Unified School District
Placentia Unified School District
Santa Ana Unified School District
Savanna Union High School District
Tustin Unified School District
Westminster Union High School District
Yorba Linda Joint Union High School District

Hospitals (Administrator)
Anaheim General Hospital
Brea Community Hospital
Chapman General Hospital, Orange
Children's Hospital of Orange County. Orange
Coastal Communities Hospital, Santa Ana

Fairview Hospital
FHP Hospital, Fountain Valley
Fountain Valley Regional Hospital and Medical Center
Hoag Hospital, Newport Beach
Kaiser Foundation Hospital, Anaheim
Orange County Community Hospital, Buena Park
Pacifica Community Hospital, Huntington Beach
Placentia Linda Community Hospital
Santa Ana Hospital and Medical Center
St. Joseph's Hospital, Orange
U.C. Irvine Medical Center
Vencor Hospital of Orange County, Westminster
Whittier Hospital and Medical Center, Buena Park

Environmental Organizations
Lawyers for Clean Water – Kim Lewand/Daniel Cooper
Orange County Coastkeeper – Garry Brown
Defend the Bay – Bob Caustin
Sierra Club, Orange County Chapter
Sierra Club, Los Angeles Chapter - Dick Hingson
Natural Resources Defense Council (NRDC) – David Beckman
Cousteau Society
Amigos De Bolsa Chica
Audobon Sea & Sage Chapter
Huntington Beach Wetlands Conservancy
Surfrider Foundation- Nancy Gardner
Alliance to Rescue Crystal Cove – Laura Davik

Newspapers
Orange County Register – Pat Brennan
Los Angeles Times – Seema Metha
Press Enterprise –
Daily Pilot – Paul Clinton

Major Water/Wastewater Agencies
Santa Ana Watershed Project Authority – Joseph Grindstaff
Irvine Ranch Water District – General Manager
Los Alisos Water District - General Manager
El Toro Water District - General Manager
San Bernardino County Flood Control District - Naresh Varma
Riverside County Flood Control & Water Conservation District – Steve Stump/Mark Wills
L.A. County Department of Public Works - Gary Hildebrand
Orange County Sanitation Districts - Blake Anderson
Orange County Water District - Bill Mills
Metropolitan Water District - Ed Mean

SECTION 7 –

DOCUMENTATION

IN SUPPORT OF TEST CLAIMS IN RE SANTA ANA RWQCB

ORDER NO. R8-2009-0030

(NPDES NO. CAS618030)

VOLUME II

FEDERAL AND STATE CASES,

STATUTES AND CONSTITUTIONAL REFERENCES

INDEX TO SECTION 7 DOCUMENTATION

VOLUME II - FEDERAL AND STATE CASES, STATUTES, AND CONSTITUTIONAL REFERENCES

INDEX TO SECTION 7 DOCUMENTATION

VOLUME II - FEDERAL AND STATE CASES, STATUTES, AND CONSTITUTIONAL REFERENCES

INDEX TO SECTION 7 DOCUMENTATION

VOLUME II - FEDERAL AND STATE CASES, STATUTES, AND CONSTITUTIONAL REFERENCES

TAB "1"

LEXSEE


Caution
As of: Jun 17, 2010

CITY OF ARCADIA, et al., Plaintiffs, v. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, et al., Defendants, - and - NATURAL RESOURCES DEFENSE COUNCIL, et al., Defendants-Intervenors.

No. C 02-5244 SBA

UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF CALIFORNIA

265 F. Supp. 2d 1142; 2003 U.S. Dist. LEXIS 9044

May 16, 2003, Decided
May 16, 2003, Filed

SUBSEQUENT HISTORY: Affirmed by City of Arcadia v. United States EPA, 411 F.3d 1103, 2005 U.S. App. LEXIS 11240 (9th Cir. Cal., 2005)
Related proceeding at City of Arcadia v. State Water Res. Control Bd., 2006 Cal. App. LEXIS 92 (Cal. App. 4th Dist., Jan. 26, 2006)

DISPOSITION: [**1] Defendants' motion to dismiss granted; plaintiffs' motion for partial summary judgment denied, and objections overruled. Action dismissed in its entirety, without leave to amend in part and with prejudice in part. Intervenors' evidentiary objections overruled as moot.

CASE SUMMARY:

PROCEDURAL POSTURE: Plaintiffs, California cities, sued defendants, including the United States Environmental Protection Agency (EPA), for declarative and injunctive relief under, inter alia, 5 U.S.C.S. § 706 of the Administrative Procedure Act (APA), 5 U.S.C.S. § 551 et seq. Defendants sought dismissal of the operative complaint. The cities sought partial summary judgment.

OVERVIEW: The first claim for relief alleged APA violations. Generally, it alleged that numerous EPA actions were arbitrary and capricious, and contrary to law, such as the EPA's establishing the EPA Trash Total Daily Maximum Loads (TMDLs) prior to receiving for review the California Trash TMDLs. Violations alleged in the second claim appeared to relate mostly to procedural requirements under the Regulatory Flexibility Act, 5 U.S.C.S. § 601 et seq., and the Small Business Regulatory Enforcement Fairness Act of 1996, 5 U.S.C.S. § 801 et seq. The third claim sought a declaration as to which party's interpretation of the law was correct and a judicial determination of the cities' rights and duties. The court concluded that all of the cities' claims were moot, meritless, or unripe. The cities' challenges to the EPA Trash TMDLs were obviously mooted the minute that EPA approved the State Trash TMDLs. The cities' challenge to EPA's authority to approve the State Trash TMDLs following its establishment of the EPA Trash TMDLs and their challenge to the "de facto TMDL procedure" were patently meritless. Finally, the cities' challenges to the "merits" of the State Trash TMDLs were premature.

OUTCOME: The EPA's motion to dismiss, in which intervenor environmental organizations joined, was granted. The cities' motion for summary adjudication of issues was denied as moot. Various objections to declarations made by the parties were either overruled or overruled as moot.

CORE TERMS: epa, trash, regional, declaration, approve, de facto, moot, water quality, agency actions, partial, summary judgment, consent decree, monitoring, pollutant, pollution, leave to amend, capriciously, reduction, npdes, intervenors, waterbody, deadline, heading, reply, declaratory relief, acted arbitrarily, injunctive, wasteload, hardship, matter jurisdiction

LexisNexis(R) Headnotes

Civil Procedure > Jurisdiction > Subject Matter Jurisdiction > Jurisdiction Over Actions > General Overview
Civil Procedure > Pleading & Practice > Defenses, Demurrers & Objections > Motions to Dismiss
[HN1]"Extra-record evidence" may be considered by the court in connection with a motion to dismiss for lack of subject matter jurisdiction.

Civil Procedure > Jurisdiction > Subject Matter Jurisdiction > Jurisdiction Over Actions > General Overview
Civil Procedure > Pleading & Practice > Defenses, Demurrers & Objections > Motions to Dismiss
[HN2]Fed. R. Civ. P. 12(b)(1) authorizes a party to seek dismissal of an action for lack of subject matter jurisdiction. When subject matter jurisdiction is challenged under Fed. R. Civ. P. 12(b)(1), the plaintiff has the burden of proving jurisdiction in order to survive the motion. A plaintiff suing in a federal court must show in his pleading, affirmatively and distinctly, the existence of whatever is essential to federal jurisdiction, and, if he does not do so, the court, on having the defect called to its attention or on discovering the same, must dismiss the case, unless the defect be corrected by amendment. In adjudicating such a motion, the court is not limited to the pleadings, and may properly consider extrinsic evidence. The court presumes lack of jurisdiction until the plaintiff proves otherwise.

Civil Procedure > Pleading & Practice > Defenses, Demurrers & Objections > Failures to State Claims
[HN3]A motion to dismiss pursuant to Fed. R. Civ. P. 12(b)(6) tests the legal sufficiency of a claim. A motion to dismiss should not be granted unless it appears beyond doubt that the plaintiff can prove no set of facts in support of his claim which would entitle him to relief. The complaint is construed in the light most favorable to the plaintiff, and all properly pleaded factual allegations are taken as true. Dismissal is proper only where there is no cognizable legal theory or an absence of sufficient facts alleged to support a cognizable legal theory. In adjudicating a motion to dismiss, the court need not accept as true unreasonable inferences or conclusory legal allegations cast in the form of factual allegations.

Civil Procedure > Pleading & Practice > Defenses, Demurrers & Objections > Failures to State Claims
Civil Procedure > Pleading & Practice > Pleadings > Amended Pleadings > Leave of Court
Civil Procedure > Dismissals > Involuntary Dismissals > Failures to State Claims
[HN4]When the complaint is dismissed for failure to state a claim, leave to amend should be granted unless the court determines that the allegation of other facts consistent with the challenged pleading could not possibly cure the deficiency. Leave to amend is properly denied where the amendment would be futile.

Environmental Law > Water Quality > General Overview
[HN5]No authority supports the conclusion that the Environmental Protection Agency (EPA) lacks authority to approve state-submitted Total Daily Maximum Loads (TMDLs) after EPA has established its own TMDLs, nor does this conclusion logically follow from the proposition that EPA is required to approve or disapprove a state-submitted TMDL within 30 days of submission.

Administrative Law > Judicial Review > Reviewability > Final Order Requirement
Civil Procedure > Judgments > Relief From Judgment > General Overview
[HN6]See 5 U.S.C.S. § 551(13).

Administrative Law > Judicial Review > Reviewability > Ripeness
Civil Procedure > Jurisdiction > Subject Matter Jurisdiction > Jurisdiction Over Actions > General Overview
Constitutional Law > The Judiciary > Case or Controversy > Ripeness
[HN7]The ripeness doctrine is drawn both from Article III limitations on judicial power and from prudential reasons for refusing to exercise jurisdiction. Unripe claims are subject to dismissal for lack of subject matter jurisdiction. In determining whether a case is ripe for review, a court must consider two main issues: the fitness of the issues for judicial decision and the hardship to the parties of withholding court consideration. To address these issues in the context of a challenge to the lawfulness of administrative action, the United States Supreme Court has identified three factors to consider: (1) whether delayed review would cause hardship to the plaintiffs; (2) whether judicial intervention would inappropriately interfere with further administrative action; and (3) whether the courts would benefit from further factual development of the issues presented.

Civil Procedure > Justiciability > Ripeness > General Overview
Civil Procedure > Justiciability > Standing > General Overview
[HN8]Injury-in-fact is a concept that relates to the issue of standing, not ripeness.

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For USA, Defendant: Charles M. O'Connor, AUSA & Chief, Environment & Natural Resources, United States Attorney's Office, San Francisco, CA. AND-- S. Randall Humm - Trial Attorney, Pamela Tonglao - Trial Attorney, U.S. Dept. of Justice, Washington, DC.

JUDGES: SAUNDRA BROWN ARMSTRONG, United States District Judge.

OPINION BY: SAUNDRA BROWN ARMSTRONG

OPINION

[*1143] **ORDER GRANTING DEFENDANTS' MOTION TO DISMISS, DENYING AS MOOT PLAINTIFFS' MOTION FOR PARTIAL SUMMARY JUDGMENT, AND DISMISSING ACTION**

[Docket Nos. 18, 28, 31, 43, 47]

Plaintiffs City of Arcadia and other California cities (collectively, "Plaintiffs") bring this action against defendants United States Environmental Protection Agency ("EPA"), the EPA Administrator, and the EPA Region IX Administrator (collectively, "Defendants") for injunctive and declaratory relief. The Natural Resources Defense Council, Santa Monica BayKeeper, and Heal the Bay (collectively, "Intervenors") have intervened as defendants.

Now before the Court are Defendants' [**2] Motion to Dismiss Second Amended Complaint (the "Motion to Dismiss"), in which Intervenors join, and Plaintiffs' Motion for Summary Adjudication of Issues (the "Motion for Partial Summary Judgment"). Having read and considered the papers submitted and being fully informed, the Court GRANTS the Motion to Dismiss, DENIES AS MOOT the Motion for Partial Summary Judgment, and DISMISSES this action. [1]

1 These matters are suitable for disposition without a hearing. *See* Fed. R. Civ. P. 78; Civ. L.R. 7-1(b).

I. BACKGROUND

[2]

2 Over the years the Court has had the pleasure and privilege of reading some excellent moving papers. Some of these submissions stand out as truly superlative. Defendants' opening and reply briefs for their Motion to Dismiss are shining examples of such superlative submissions. In these briefs Defendants discuss three areas of federal law generally regarded as highly complex--environmental regulation, administrative law, and justiciability--in direct, succinct, well-supported, and powerfully illuminating fashion. Whereas a poor presentation of the statutory and regulatory framework and Defendants' arguments might have required the Court to spend hours to apprehend their arguments, the high quality of Defendants' writing enabled the Court to grasp them in a matter of minutes. Defendants' briefs also thankfully avoid leveling the sorts of thinly veiled (or, at times, not-at-all-veiled) *ad hominem* attacks that unfortunately pervade too much legal writing nowadays. The Court thus commends Defendants' counsel for their outstanding writing and expresses its appreciation for it.

[**3] **A. *Statutory and Regulatory Background***

1. *Water Pollution Control Under the Clean Water Act*

TheClean Water Act ("CWA"), 33 U.S.C. §§ 1251-1387, utilizes two fundamental approaches to control water pollution: technology-based regulations and water quality standards. Technology-based [*1144] regulations seek to reduce pollution by requiring a discharger to effectuate equipment or process changes, without reference to the effect on the receiving water; water quality standards fix the permissible level of pollution in a specific body of water regardless of the source of pollution.

The National Pollutant Discharge Elimination System ("NPDES") permit program is a key means of implementing both technology-based requirements and water quality standards. 33 U.S.C. §§ 1311(b)(1)(C), 1342(a)(1); 40 C.F.R. § 122.44(a), (d)(1). An NPDES permit establishes specific limits of pollution for an individual discharger. A discharge of pollutants (other than dredged or fill material) from any "point source," which is defined as "any discernible, confined and discrete conveyance . . . from which pollutants are or may [**4] be discharged," 33 U.S.C. § 1362(14), into the waters of the United States is prohibited unless that discharge complies with the discharge limits and other requirements of an NPDES permit. *Id.* §§ 1311(a), 1362(12). At

present, 45 states, including California, are authorized to administer the NPDES permit program. State Program Status, *at* http://cfpub.epa.gov/npdes/statestats.cfm?program_id=45&view=general. In the remaining states, EPA issues the permits. 33 U.S.C. § 1342(a).

2. *Total Maximum Daily Loads ("TMDLs")*

Section 303(d) of the CWA and EPA's implementing regulations require states to identify and prioritize waterbodies where technology-based effluent limitations and other required controls are insufficiently stringent to attain water quality standards. *See* 33 U.S.C. § 1313(d); 40 C.F.R. § 130.7(b). States must develop a "total maximum daily load," or "TMDL," for each pollutant of concern in each waterbody so identified. A TMDL represents the maximum amount of pollutant "loading" that a waterbody can receive from all combined sources without exceeding applicable [**5] state water quality standards. Although the term "total maximum daily load" is not expressly defined in the CWA, EPA's regulations define a TMDL for a pollutant as the sum of: (1) the "wasteload allocations," which is the amount of pollutant that can be discharged to a waterbody from point sources, (2) the "load allocations," which represent the amount of a pollutant in a waterbody attributable to nonpoint sources or natural background, and (3) a margin of safety. 40 C.F.R. §§ 130.2(g)-(i), 130.7(c)(1).

Under CWA Section 303(d)(2), EPA is required to review and approve or disapprove TMDLs established by states for impaired waters within thirty days of submission. 33 U.S.C. § 1313(d)(2). If EPA disapproves a state TMDL submission, EPA must issue its own TMDL for that waterbody within thirty days. *Id.*

3. *Implementation of TMDLs*

TMDLs established under Section 303(d)(1) of the CWA function primarily as planning devices and are not self-executing. *Pronsolino v. Nastri*, 291 F.3d 1123, 1129 (9th Cir. 2002) ("TMDLs are primarily informational tools that allow the states to proceed from the identification of [**6] waters requiring additional planning to the required plans.") (citing *Alaska Ctr. for the Env't v. Browner*, 20 F.3d 981, 984-85 (9th Cir. 1994)). A TMDL does not, by itself, prohibit any conduct or require any actions. Instead, each TMDL represents a goal that may be implemented by adjusting pollutant discharge requirements in individual NPDES permits or establishing nonpoint source controls. *See, e.g., Sierra Club v. Meiburg*, 296 F.3d 1021, 1025 (11th Cir. 2002) ("Each TMDL serves as the goal for the level of that pollutant in the waterbody to which that TMDL applies. . . . The theory is that individual-discharge permits [*1145] will be adjusted and other measures taken so that the sum of that pollutant in the waterbody is reduced to the level specified by the TMDL."); *Idaho Sportsmen's Coalition v. Browner*, 951 F. Supp. 962, 966 (W.D. Wash. 1996) ("TMDL development in itself does not reduce pollution. . . . TMDLs inform the design and implementation of pollution control measures."); *Pronsolino*, 291 F.3d at 1129 ("TMDLs serve as a link in an implementation chain that includes . . . state or local plans for point and nonpoint [**7] source pollution reduction . . . ."); *Idaho Conservation League v. Thomas*, 91 F.3d 1345, 1347 (9th Cir. 1996) (noting that a TMDL sets a goal for reducing pollutants). Thus, a TMDL forms the basis for further administrative actions that may require or prohibit conduct with respect to particularized pollutant discharges and waterbodies.

For point sources, limitations on pollutant loadings may be implemented through the NPDES permit system. 40 C.F.R. § 122.44(d)(1)(vii)(B). EPA regulations require that effluent limitations in NPDES permits be "consistent with the assumptions and requirements of any available wasteload allocation" in a TMDL. *Id.* For nonpoint sources, limitations on loadings are not subject to a federal nonpoint source permitting program, and therefore any nonpoint source reductions can be enforced against those responsible for the pollution only to the extent that a state institutes such reductions as regulatory requirements pursuant to state authority. *Pronsolino v. Marcus*, 91 F. Supp. 2d 1337, 1355-56 (N.D. Cal. 2000), *aff'd sub nom. Prosolino v. Nastri*, 291 F.3d 1123 (9th Cir. 2002). [**8]

4. *California Water Quality Control Statutory and Regulatory Framework*

California effectuates the foregoing requirements of the CWA primarily through institutions and procedures set out in certain provisions of the California Water Code (the "Water Code"), including those of the California Porter-Cologne Water Quality Control Act (the "Porter-Cologne Act"), Cal. Water Code § 13000 *et seq.* These Water Code provisions established the State Water Resources Control Board (the "State Board") within the California Environmental Protection Agency to formulate and adopt state policy for water quality control. Cal. Water Code §§ 174-186, 13100, 13140. The State Board is designated as the state water pollution control agency for all purposes stated in the CWA and is the agency authorized to exercise powers delegated to it under the CWA. 33 U.S.C. § 1313; Cal. Water Code § 13160.

The Porter-Cologne Act established nine California Regional Water Quality Control Boards (individually, a "Regional Board"; collectively, the "Regional Boards"), Cal. Water Code §§ 13200, 13201, which operate under the purview of the State Board, *see id.* § 13225. Each Regional [**9] Board is comprised of nine members, *id.* § 13201, and is required to appoint an executive of-

ficer, *id.* § 13220(c), to whom the Regional Board may delegate all but some of its powers and duties, *id.* § 13223. Each Regional Board is required to formulate and adopt water quality control plans for all areas within the region. *Id.* § 13240. The State Board may approve such plan, or it may return it to the Regional Board for further submission and resubmission to the State Board. *Id.* § 13245. It must act on any water quality control plan within 60 days of a Regional Board's submission of such plan to the State Board, or 90 days after resubmission of such plan. *Id.* § 13246. A water quality control plan will not become effective unless and until it is approved by the State Board, followed by approval by the state's Office of Administrative Law ("OAL") in accordance with the appropriate procedures. [*1146] *Id.* § 13245; Cal. Gov't Code §§ 11340.2, 11349.3, 11353(b)(5).

The State Board is required to formulate, adopt, and revise general procedures for the formulation, adoption, and implementation of water quality control plans by the Regional Boards. Cal. Water Code §13164. [**10] The State Board may adopt water quality control plans for purposes of the CWA that include the regional water quality control plans submitted by the Regional Boards. *See id.* § 13170. Such plans, when adopted by the State Board, supersede any regional water quality control plans for the same waters to the extent of any conflict. *Id.*

B. ***Factual Summary and Procedural History***

1. ***The Consent Decree***

The events underlying the instant action were set in motion by the disposition of *Heal the Bay, Inc., et al. v. Browner, et al.*, No. C 98-4825 SBA ("*Heal the Bay*"), an action previously before this Court. In *Heal the Bay*, an individual and two environmental groups (which groups are now two of the three Intervenors in the instant action) brought a civil action against EPA, the EPA Administrator, and the EPA Region IX Administrator. Their suit primarily concerned EPA's alleged failure to perform its alleged duty under the CWA either to approve or to disapprove TMDLs submitted to EPA by the state of California.

On March 23, 1999, the Court filed an Amended Consent Decree (the "Consent Decree") [3] in which "EPA agreed to ensure that a TMDL [would] [**11] be completed for each and every pairing of a [Water Quality Limited Segment, as defined in 40 C.F.R. 130.2(j),] and an associated pollutant in the Los Angeles Region" set forth in an attachment to the Consent Decree by specified deadlines. (Consent Decree PP2a, 2b, 3, 3c.) [4] Pursuant to the Consent Decree, for each pairing EPA was required either to approve a TMDL submitted by California by a specified deadline or, if it did not approve a TMDL by the date specified, to establish a TMDL within one year of the deadline, unless California submitted and EPA approved a TMDL prior to EPA's establishing the TMDL within the one-year period. (*Id.* P3a.) By March 24, 2002, EPA was required either to have approved a state-submitted TMDL for trash in the Los Angeles River or to have established the TMDL itself. (*Id.* PP2d, 3a; *id.* Att. 2, 3.) [5]

3 No original consent decree was entered. Rather, according to Defendants' representations in their opening brief, the Consent Decree incorporated amendments from an original proposal at the urging of proposed intervenors California Association of Sanitation Agencies and California Alliance of POTWs. (*See* Mot. to Dismiss at 6.)

[**12]

4 The Court takes judicial notice of the existence of the Consent Decree and the contents thereof. *See, e.g.*, *Egan v. Teets*, 251 F.2d 571, 577 n.10 (9th Cir. 1957) (holding that district court was entitled to take judicial notice of prior proceedings involving same petitioner before same district court). The Consent Decree is filed as Docket No. 25 in *Heal the Bay*, No. C 98-4825 SBA.

5 Defendants contend that the relevant deadline was March 22, 2002, (Mot. to Dismiss at 6), and Plaintiffs echo this contention in their Second Amended Complaint, (Second Am. Compl. P25). Review of the terms of the Consent Decree, however, reveal that the deadline was a different date. The Consent Decree defines "effective date" as the date on which the Consent Decree is entered. (*Id.* P2d.) Although the Court signed the Consent Decree on March 22, 1999, (*id.* at 29), it was not entered on the docket until March 24, 1999. Under the terms of Attachments 2 and 3 of the Consent Decree, TMDLs for trash for all Water Quality Limited Segments the Los Angeles River were to be submitted by California within two years of the effective date--March 24, 2001. (*Id.* Atts. 2, 3.) Since EPA was required to ensure that a TMDL was in place within one year of California's deadline to submit a proposed TMDL, (*id.* P3a), the deadline for final approval or establishment of a TMDL was March 24, 2002.

Nevertheless, based on the evidence tendered by EPA, it is clear that EPA believed that the deadline was March 22, 2002. (*See* Decl. of David W. Smith in Supp. of EPA's Mot. to Dismiss, Ex. B at 2.) As is evident from the discussion below, this discrepancy is immaterial to the Court's analysis of the merits of the Motion to Dismiss.

[**13] [*1147] **2. *EPA's Issuance of TMDLs and Approval of State-submitted TMDLs***

One of the responsibilities of the Regional Board for the Los Angeles region (the "Los Angeles Regional Board") is to develop TMDLs under the CWA for waterbodies in Los Angeles and Ventura Counties. (Decl. of Dennis Dickerson in Supp. of EPA's Mot. to Dismiss (the "Dickerson Declaration") P2.) With few exceptions, TMDLs are developed as draft TMDLs by Los Angeles Regional Board staff and then submitted to the board to be adopted as amendments to the Los Angeles Regional Board's Water Quality Control Plan, which is known as the Basin Plan. (*Id.*) Basin Plan amendments are then submitted to the State Board, and then subsequently to the OAL; after they have been approved by both of these agencies, they are submitted to EPA. (*Id.*)

On September 19, 2001, the Los Angeles Regional Board adopted TMDLs for trash for the Los Angeles River watershed. (*Id.* P3.) "Trash" was defined as man-made litter, as defined in California Government Code § 68055.1(g). (*Id.* Ex. A at 2). These TMDLs (the "State Trash TMDLs") were approved by the State Board on February 19, 2002, by OAL on July 16, 2002, and ultimately [**14] by EPA by letter dated August 1, 2002. (*Id.* P3, Ex. C; Second Am. Compl. for Injunctive & Declaratory Relief ("SAC") PP27, 30.) Prior to its approval of the State Trash TMDLs, however, EPA issued its own TMDLs for trash for the Los Angeles River Basin (the "EPA Trash TMDLs") on March 19, 2002. (SAC P26; Decl. of David W. Smith in Supp. of EPA's Mot. to Dismiss (the "Smith Declaration") Ex. B.) The EPA's August 1, 2002, letter approving the State Trash TMDLs announced that they "superceded" the EPA Trash TMDLs. (SAC P31; Smith Decl. P7, Ex. C.)

3. *TMDLs Now in Effect and Implementation Provisions*

Under the provisions of the TMDLs now in effect--the State Trash TMDLs--the numeric target is zero trash in the Los Angeles River. (Dickerson Decl. Ex. A at 16, 29.) Based on this target, California has determined that the wasteload allocations for trash in the Los Angeles River also must be zero. (*Id.*)

To achieve this goal, California has provided, along with the State Trash TMDLs, implementation provisions that specify a phasing-in of progressive reductions in municipal stormwater wasteload allocations over a ten-year period, following completion of a two-year initial [**15] baseline monitoring period. (*Id.* Ex. A at 21.) While the baseline monitoring program is taking place, cities will be deemed to be in compliance with the wasteload allocations provided that all of the trash that is collected during this period is disposed of in compliance with all applicable regulations. (*Id.* Ex. A at 27.) A baseline monitoring report is due to the Los Angeles Regional Board by February 15, 2004. (*Id.* P6.) [6]

6 Plaintiffs have filed Plaintiffs' Objections to Declarations of David W. Smith and Dennis Dickerson Offered by Defendants in Support of Defendants' Motion to Dismiss Second Amended Complaint ("Plaintiffs' Objections"). Plaintiffs' Objections challenge the admissibility of, *inter alia*, the statements in paragraph 6 of the Dickerson Declaration. The Court considers and resolves the objections to these statements in note 20, *infra*. Although Plaintiffs have objected to all the statements in paragraph 6, careful review of the arguments advanced in these objections reveals that they are not in fact objecting to the statement in paragraph 6 that "the baseline monitoring report is due to the [Los Angeles] Regional Board by February 15, 2004." (Dickerson Decl. P6; *see* Pls.' Objections at 3-4.) To the extent that Plaintiffs are in fact objecting to this statement, however, the Court OVERRULES their objections to this statement for the reasons set forth in note 20, *infra*.

[**16] [*1148] The State Trash TMDLs and incremental wasteload allocations will be implemented through the Los Angeles stormwater permit, which the Los Angeles Regional Board will need to amend to incorporate specific, enforceable permit requirements. (*Id.* P8.) [7] The implementation provisions in the TMDLs allow permittees to "employ a variety of strategies to meet the progressive reductions in their Waste Load Allocations" and maintain that they "are free to implement trash reduction in any manner they choose." (*Id.* Ex. A at 29.) The wasteload reduction strategies are broadly classified as either end-of-pipe full capture structural controls, partial capture control systems, and/or institutional controls. (*Id.*) The provisions state that permittees will be deemed to be in compliance with the final wasteload allocation for their associated drainage areas if they utilize "full capture systems" that are adequately sized and maintained and maintenance records are available for inspection by the Los Angeles Regional Board. (*Id.* Ex. A at 30.)

7 Under heading II.2 of Plaintiffs' Objections, Plaintiffs object to the statements in paragraph 8 of the Dickerson Declaration relating to the Los Angeles Regional Board's understanding of how the State Trash TMDLs will be implemented. (Pls.' Objections at 4.) All of the grounds on which Plaintiffs object are meritless. First, Plaintiffs contend that the statements are objectionable as [HN1]"extra-record evidence." Such evidence, however, may be considered by the Court in

connection with a motion to dismiss for lack of subject matter jurisdiction. *See Ass'n of Am. Med. Colleges v. United States*, 217 F.3d 770, 778 (9th Cir. 2000). Since Defendants contend that Plaintiffs' challenges to the merits of EPA's approval of the State Trash TMDLs are unripe, and since the Court considers how these TMDLs will be implemented at least in part for this purpose, this evidence is properly before the Court. Second, Plaintiffs contend that the statements constitute inadmissible hearsay. These statements, however, do not contain or even implicitly rely on any out-of-court statement by one other than Mr. Dickerson for the truth of the matter stated.

Third, Plaintiffs claim that the statements lack foundation, although they do not explain what they mean by this. To the extent Plaintiffs are asserting that the declarant lacks personal knowledge of the Los Angeles Regional Board's intentions, that assertion is refuted by the fact that Mr. Dickerson has been Executive Officer of the board since 1997. (Dickerson Decl. P1.) Fourth, Plaintiffs insist that "the statements are objectionable and inadmissible as the best evidence of the implementation requirements vis-a-vis the TMDLs, is set forth in the TMDLs themselves, as well as in the terms of other enforceable documents, documenting the actions taken by the [Los Angeles] Regional Board, such as the terms of the Municipal Storm Water Permit referenced in the declaration." (Pls.' Objections at 4.) This objection misunderstands the nature of the "best evidence" rule: that rule applies *only* where the witness attempts to testify as to the *contents of a writing, recording, or photograph. See* Fed. R. Evid. 1002. Such is not the case here. Moreover, this objection reflects a fundamental misunderstanding of the nature of TMDLs. TMDLs are *not* self-executing; they require the appropriate state to issue regulations implementing them. It is also not clear what Plaintiffs mean by their assertion that documents "documenting the actions taken by the Regional Board" constitute "enforceable documents." Finally, Plaintiffs assail the statements at issue as "not competent." (*Id.*) Plaintiffs do not explain what they mean by this objection. The Court thus disregards it. Accordingly, the Court OVERRULES the objections under Heading II.2 of Plaintiffs' Objections.

[**17] [*1149] **4. *The Instant Action***

Plaintiffs filed their initial complaint on June 28, 2002, in the United States District Court for the Central District of California. On August 30, 2002, they filed an amended complaint. On October 30, 2002, the case was transferred to this Court, the United States District Court for the Northern District of California. Pursuant to the parties' stipulation and the Court's Order thereon, Plaintiffs filed a Second Amended Complaint for Injunctive and Declaratory Relief (the "SAC" or "Complaint") on December 12, 2002.

The SAC is the operative complaint for purposes of the Motion to Dismiss and the Motion for Partial Summary Judgment. The SAC purports to assert three claims for relief. The First Claim for Relief is ostensibly brought pursuant to a provision of the Administrative Procedure Act (the "APA"), 5 U.S.C. § 706, (SAC at 34), although certain allegations thereunder also invoke the CWA, the Regulatory Flexibility Act (the "RFA"), and the Small Business Regulatory Enforcement Fairness Act of 1996 (the "SBREFA"), (*id.* PP84-85). [8] The First Claim for Relief alleges several violations of the APA: (1) EPA acted without authority [**18] and acted arbitrarily and capriciously by establishing the EPA Trash TMDLs prior to receiving for review the State Trash TMDLs, (SAC PP78-79); (2) EPA acted without authority and arbitrarily and capriciously by reviewing and approving the State Trash TMDLs because EPA had already established the EPA Trash TMDLs, (*id.* PP80, 83); (3) EPA acted arbitrarily and capriciously and in excess of its jurisdiction with regard to the manner by which it established the EPA Trash TMDLs, (*id.* PP81-82); (4) the collective actions of California and EPA relating to issuance of the EPA Trash TMDLs and subsequent approval of the State Trash TMDLs constitute a "*de facto* TMDL procedure" that is arbitrary, capricious, and contrary to law, (*id.* PP84-86); [9] and (5) EPA acted arbitrarily and capriciously by approving the State Trash TMDLs because those TMDLs were "patently defective" and established not in accordance with the procedures of the CWA and California law, (*id.* P87). [10] The Second Claim for Relief challenges [*1150] the validity of two alleged agency actions, the EPA Trash TMDLs and the "*de facto* TMDL procedure," under the APA, 5 U.S.C. § 551 *et seq.*; the [**19] RFA, 5 U.S.C. § 601 *et seq.*; and the SBREFA, 5 U.S.C. § 801 *et seq.* (SAC at 40; *id.* PP89-99.) The violations alleged under the Second Claim for Relief, however, appear to relate mostly to procedural requirements under the RFA and the SBREFA. (*See id.* PP91-93, 95-98 (invoking 5 U.S.C. §§ 601(5), 601(6), 603, 604(a), 604(b), 605(b), and 611).) [11] The Third Claim for Relief is derivative of the first two claims. It seeks a declaration under the Declaratory Judgment Act, 28 U.S.C. §§ 2201-2202, as to which party's interpretation of the law is correct and a judicial determination of Plaintiffs' rights and duties. (*Id.* PP100-105.)

8 With respect to the First Claim for Relief, the SAC comes perilously close to violating Federal

Rule of Civil Procedure 8(a)'s mandate of providing "a *short and plain* statement of the claim showing that the pleader is entitled to relief...." Fed. R. Civ. P. 8(a) (emphasis added). In particular, Plaintiffs' practice of indicating that the First Claim for Relief is based exclusively on the APA, (SAC at 34), yet at the same time claiming in the allegations thereunder that the actions at issue violate other statutes, (*id.* PP84-85), is confusing. Aside from potentially misleading Defendants as to the nature of the claims against them, it has required the Court to spend needless additional time and effort scrutinizing the allegations of the SAC because the Court cannot trust the accuracy of the headings of the SAC. The practice is especially reprehensible because the Court has already been forced to spend undue time and effort identifying and parsing out the five independent, discrete claims for relief that are set out in stream-of-consciousness fashion in the allegations underlying the "First Claim for Relief"--which heading necessarily suggests a *single* claim. *See infra*.

[**20]

9 This alleged *de facto* TMDL procedure is also claimed to violate the CWA, the RFA, and the SBREFA. (*Id.* PP84-85.)

10 Although not clearly stated, this last claim (claim (5)) within the First Claim for Relief appears to challenge the *merits* of EPA's approval of the State Trash TMDLs, as opposed to, for example, challenging EPA's authority to approve *any* state-submitted TMDLs after it issued the EPA Trash TMDLs, (*see id.* PP80, 83). Presumably, this last claim encompasses challenges to, for example, EPA's approval of the State Trash TMDLs where these TMDLs covered "unlisted" waters. (*See id.* PP42, 49, 62.) Defendants appear to have also construed this claim as challenging the merits of EPA's approval of the State Trash TMDLs, and they move to dismiss this claim as unripe. (*See* Mot. to Dismiss at 20-24.) Plaintiffs appear to concur in Defendants' construction of this claim. (*See* Pls.' Opp. Br. at 16-20.) Accordingly, the Court construes this last claim as challenging the merits of EPA's approval of the State Trash TMDLs.

11 This is yet another example of Plaintiffs' objectionable drafting of the SAC. In particular, the paragraph alleging improper agency action supposedly giving rise to the Second Claim for Relief, paragraph 96, identifies four bases on which the CWA, the APA, the RFA, and the SBREFA were violated. (*Id.* P96.) Of these four bases, however, only the first (denoted reason "(a)") appears to have anything to do with the APA; the remaining three ("(b)," "(c)," and "(d)") appear to relate solely to provisions of the RFA and SBREFA, at least based on the allegations of the previous paragraphs under the heading "Second Claim for Relief." (*Id.; compare id.* (*e.g.*, alleging that EPA failed to perform an initial screening of the EPA Trash TMDLs to determine whether they would have a significant economic impact on a substantial number of small entities) *with id.* PP91-93, 95 (*e.g.*, alleging that RFA requires agencies to screen all proposed rules and identify whether such rules would have such an impact, (*id.* P92))).

The Court is thus left with the distinct impression that either Plaintiffs have been careless in drafting the Second Claim for Relief or they have invoked various statutes and inserted a number of allegations in scattershot fashion in the hope that something will slip by Defendants undetected and "stick." Aside from arguably violating Rule 8(a), this practice is unfair not only to Defendants, but also to the Court, because it makes the Court's resolution of Defendants' arguments considerably more difficult. (Nor is the Court interested in any supporting evidence or clarification from Plaintiffs' counsel regarding the nature of their claims that is not in the four corners of the SAC or incorporated therein by reference. The SAC speaks for itself on that score.) Based on its review of the SAC, the Court construes the allegations underlying the Second Claim for Relief as alleging violation of the APA, the RFA, and the SBREFA only with respect to EPA's alleged failure to provide Plaintiffs with notice and an opportunity for comment with regard to the *de facto* TMDL procedure, discussed *infra*, and the establishment of the EPA Trash TMDLs; the Court construes them to allege violation of the RFA and the SBREFA, but not the APA, with regard to the remaining allegations under the heading of "Second Claim for Relief." (*See* SAC P96.)

[**21] On January 13, 2003, Defendants and Intervenors filed answers to the SAC. On that same day, Defendants also filed the instant Motion to Dismiss, which seeks dismissal of the entire action pursuant to Federal Rules of Civil Procedure 12(b)(1)and 12(b)(6). Intervenors filed Intervenors' Notice in Support of Defendants' Motion to Dismiss on February 3, 2003, indicating in brief fashion that they agreed with the arguments in the Motion to Dismiss and therefore supported the motion. On March 10, 2003, Plaintiffs filed their Motion for Partial Summary Judgment.

Most of the plaintiffs in the instant action are currently plaintiffs in a California state court action against the Los Angeles Regional Board and the State Board challenging the legality of the State Trash TMDLs. (*Id.* P33.) Three other lawsuits have similarly been filed challenging either [*1151] California's establishment of the State Trash TMDLs or EPA's approval of the same. (*Id.*)

II. LEGAL STANDARD

A. *Rule 12(b)(1)*

[HN2]Federal Rule of Civil Procedure 12(b)(1) authorizes a party to seek dismissal of an action for lack of subject matter jurisdiction. "When subject matter jurisdiction is challenged under [**22] Federal Rule of Procedure 12(b)(1), the plaintiff has the burden of proving jurisdiction in order to survive the motion." *Tosco Corp. v. Communities for a Better Env't*, 236 F.3d 495, 499 (9th Cir. 2001). "'A plaintiff suing in a federal court must show in his pleading, affirmatively and distinctly, the existence of whatever is essential to federal jurisdiction, and, if he does not do so, the court, on having the defect called to its attention or on discovering the same, must dismiss the case, unless the defect be corrected by amendment.'" *Id.* (quoting *Smith v. McCullough*, 270 U.S. 456, 459, 70 L. Ed. 682, 46 S. Ct. 338 (1926)). In adjudicating such a motion, the court is not limited to the pleadings, and may properly consider extrinsic evidence. *See Ass'n of Am. Med. Colleges v. United States*, 217 F.3d 770, 778 (9th Cir. 2000). The court presumes lack of jurisdiction until the plaintiff proves otherwise. *See Stock West, Inc. v. Confederated Tribes*, 873 F.2d 1221, 1225 (9th Cir. 1989).

B. *Rule 12(b)(6)*

[HN3]A motion to dismiss pursuant to Federal Rule of Civil Procedure 12(b)(6) tests the legal sufficiency of a claim. [**23] *Navarro v. Block*, 250 F.3d 729, 731 (9th Cir. 2001). A motion to dismiss should not be granted "unless it appears beyond doubt that the plaintiff can prove no set of facts in support of his claim which would entitle him to relief." *Conley v. Gibson*, 355 U.S. 41, 45-46, 2 L. Ed. 2d 80, 78 S. Ct. 99 (1957); *accord Johnson v. Knowles*, 113 F.3d 1114, 1117 (9th Cir. 1997). The complaint is construed in the light most favorable to the plaintiff, and all properly pleaded factual allegations are taken as true. *Jenkins v. McKeithen*, 395 U.S. 411, 421, 23 L. Ed. 2d 404, 89 S. Ct. 1843 (1969); *see also Everest & Jennings, Inc. v. Am. Motorists Ins. Co.*, 23 F.3d 226, 228 (9th Cir. 1994). "Dismissal is proper only where there is no cognizable legal theory or an absence of sufficient facts alleged to support a cognizable legal theory." *Navarro*, 250 F.3d at 731. In adjudicating a motion to dismiss, the court need not accept as true unreasonable inferences or conclusory legal allegations cast in the form of factual allegations. *W. Mining Council v. Watt*, 643 F.2d 618, 624 (9th Cir. 1981). [**24]

[HN4]When the complaint is dismissed for failure to state a claim, "leave to amend should be granted unless the court determines that the allegation of other facts consistent with the challenged pleading could not possibly cure the deficiency." *Schreiber Distrib. Co. v. Serv-Well Furniture Co.*, 806 F.2d 1393, 1401 (9th Cir. 1986). Leave to amend is properly denied "where the amendment would be futile." *DeSoto v. Yellow Freight Sys., Inc.*, 957 F.2d 655, 658 (9th Cir. 1992).

III. DISCUSSION

Defendants have filed a Motion to Dismiss; Plaintiffs have filed a Motion for Partial Summary Judgment. The Motion for Partial Summary Judgment seeks adjudication of issues pertaining to Plaintiffs' challenge to the procedural legitimacy of the State Trash TMDLs. Because the Court grants the Motion to Dismiss (as discussed below), it does not reach the merits of the Motion for Partial Summary Judgment and therefore denies it as moot. Accordingly, the following discussion pertains [*1152] only to the Motion to Dismiss, except where noted.

At the outset, the Court notes that it need not analyze all the arguments presented in Defendants' opening brief because Plaintiffs [**25] concede that certain of their claims are moot. In particular, Defendants contend in their opening brief for the Motion to Dismiss that the EPA Trash TMDLs no longer have any force or effect because EPA has announced that the State Trash TMDLs "supercede" the EPA Trash TMDLs; consequently, Defendants maintain, Plaintiffs' claims that EPA lacked authority to establish the EPA Trash TMDLs, (SAC P78-79), and that the procedures by which EPA established them were unlawful, (*id.* PP81-82, 90, 94, 96-97, 99), are moot. (Mot. to Dismiss at 12-15.) In their opposition brief, Plaintiffs express satisfaction with Defendants' assurances that the EPA Trash TMDLs are no longer (and can never be) in effect and therefore "withdraw their claims directly challenging the validity of EPA's TMDLs . . . ." (Pls.' Opp. Br. at 4 n.6.) Defendants acknowledge this withdrawal in their reply brief. (Defs.' Reply Br. at 1.) As a result, the Court GRANTS the Motion to Dismiss pursuant to Federal Rule of Civil Procedure 12(b)(1) with regard to claims (1) and (3) (SAC PP78-79 and SAC PP81-82, respectively) within the First Claim for Relief of the SAC identified in Part I.B.4 of this Order, *supra*. The Court [**26] also GRANTS the Motion to Dismiss pursuant to Rule 12(b)(1) with regard to the Second Claim for Relief of the SAC to the extent it challenges the validity of the EPA Trash

TMDLs. (*See* SAC PP90, 94, 96-97, 99.) The Court now addresses the parties' arguments in relation to the remaining claims.

A. *Challenge to EPA's Authority to Approve the State Trash TMDLs*

Plaintiffs claim that EPA lacked authority to approve the State Trash TMDLs because it had already established the EPA Trash TMDLs. (SAC PP80, 83.) Defendants move to dismiss this claim pursuant to Rule 12(b)(6) for failure to state a claim upon which relief can be granted. (Mot. to Dismiss at 19-20.) Defendants contend that EPA in fact has a statutory *obligation* under 33 U.S.C. § 1313 to review any proposed TMDLs submitted by a state and either approve them or disapprove them. (*Id.*) Defendants assert that nothing in the CWA or otherwise divests EPA of jurisdiction to approve a state-submitted TMDL once EPA has issued its own TMDLs, and in fact, recognizing such a principle would thwart Congressional intent to vest states with the primary responsibility of implementing the CWA's provisions. [**27] (*Id.* at 20.) Plaintiffs counter (in less than straightforward fashion) that by allowing California to submit the State Trash TMDLs to EPA after EPA established the EPA Trash TMDLs, EPA effectively "remanded" a "TMDL submission" to California, and EPA lacked authority to "remand" this submission and subsequently approve California's "resubmission." (*See* Pls.' Opp. Br. at 15-16.) [12]

> 12 Plaintiffs also argue that EPA lacked authority to approve the State Trash TMDLs because these TMDLs cover "unlisted" waters; according to Plaintiffs, EPA has authority only to approve TMDLs for "listed" waters. (*Id.* at 14-15.) As Defendants correctly point out, this argument goes to the merits of EPA's approval of the State Trash TMDLs, not to the issue of whether EPA had any authority to approve any state-submitted TMDLs after issuing its own TMDLs--the issue raised by this claim. (Defs.' Reply Br. at 10 n.9.) Plaintiffs' argument is relevant only to their own Motion for Partial Summary Judgment, not to the arguments raised in the Motion to Dismiss.

[**28] Plaintiffs' counterargument is meritless. [HN5]No authority supports the conclusion that EPA lacks authority to approve [*1153] state-submitted TMDLs after EPA has established its own TMDLs, nor does this conclusion logically follow from the proposition that EPA is required to approve or disapprove a state-submitted TMDL within 30 days of submission. Moreover, as Defendants astutely note, recognizing such a principle "would lead to absurd results. Under this scenario, once EPA establishes a TMDL, the State could never update it or modify it based on changed circumstances." (Mot. to Dismiss at 20.) Finally, like Defendants, (*see* Defs.' Reply Br. at 10), the Court is at a loss to understand what Plaintiffs mean by their contention that EPA "remanded" the EPA Trash TMDLs to California for revision and resubmission. Nothing in the allegations of the Complaint remotely suggest any sort of sending back of TMDLs to California for revision or additional development. And even if there were such a "remand," it does not follow that EPA lacked authority to approve the State Trash TMDLs.

For these reasons, the Court GRANTS the Motion to Dismiss with respect to claim (2) within the First Claim for Relief, [**29] (SAC PP80, 83), *see supra* Part I.B.4. Additionally, it is evident that Plaintiffs cannot amend the SAC to allege facts sufficient to rehabilitate this claim because it is meritless as a matter of law. Accordingly, this claim is DISMISSED WITHOUT LEAVE TO AMEND and WITH PREJUDICE.

B. *The "*De_Facto *TMDL Procedure"*

Under claim (4) within their First Claim for Relief, *see supra* Part I.B.4, and the Second Claim for Relief, Plaintiffs challenge the "*de facto* TMDL procedure," [13] which they consider to consist of:

> the establishment by the [Los Angeles] Regional Board of the TMDL, followed by the preparation and notice of the TMDL by USEPA, followed by the approval of the TMDL by the State Board, followed by the "establishment" by USEPA of the EPA TMDL, followed by the determination by USEPA to review and/or approve the subsequently submitted State TMDL, and to thereafter find the USEPA established TMDL is "superceded" . . . .

(SAC P85.) Plaintiffs assert that this procedure violates the APA, the RFA, and the SBREFA. (*Id.* PP84-85, 96-98.) Plaintiffs allege not only that they have previously suffered from the effectuation of the *de facto* [**30] TMDL procedure, but also that they will suffer from the effectuation of the procedure in the future. (*See id.* PP84-86.)

> 13 Plaintiffs do not expressly use the phrase "*de facto* TMDL procedure" in the SAC. Instead, they refer to this procedure as the "TMDL Procedure" and contend that EPA has effected a "*de facto* adoption" of the "TMDL Procedure." (SAC P85.) For ease of reference, the Court will refer to

what Plaintiffs call the "TMDL Procedure" as the "*de facto* TMDL procedure."

Defendants move to dismiss these claims by pointing out that the APA and the RFA, which was amended by the SBREFA, permit challenges *only* to "final agency action." (Mot. to Dismiss at 16-19.) [14] They explain that the APA defines [HN6]"agency action" to include "the whole or a part of any agency rule, order, license, sanction, relief, or the equivalent or denial thereof, or failure to act." (*Id.* at 16 (quoting 5 U.S.C. § 551(13).) (They do not indicate whether this definition applies to the RFA and [**31] SBREFA as well.) Defendants assert that what Plaintiffs characterize as a *de* [*1154] *facto* TMDL procedure is not an "agency action," much less a final agency action, but in fact a sequence of events; as such, they maintain, the procedure cannot give rise to a challenge under the APA or under the RFA, as amended by the SBREFA.

14 Defendants also contend that the RFA, as amended by the SBREFA, provides a narrow and exclusive means of judicial review that is not available here due to the nature of Plaintiffs' challenge to the *de facto* TMDL procedure. (*See id.* at 16.)

Plaintiffs respond to Defendants' arguments somewhat curiously. Despite vehemently asserting that Defendants' arguments are incorrect, they do not dispute that a challenge will lie only to final agency action. Instead, they contend that the *de facto* TMDL procedure "led up to and resulted in 'final agency action,'" (Pls.' Opp. Br. at 22), namely the August 1, 2002, approval of the State Trash TMDLs. Plaintiffs also argue at great length that [**32] their challenge to this procedure is not moot because it falls under the "capable of repetition, yet evading review" exception to the mootness doctrine. (*Id.* at 22-25.)

Defendants' arguments are persuasive, and Plaintiffs' responses are both uncompelling and nonresponsive. As Defendants correctly note, (*see* Defs.' Reply Br. at 4-5), Plaintiffs' suggestion that they are challenging EPA's approval of the State Trash TMDLs, as opposed to the so-called "TMDL procedure," is belied by the allegations of the SAC: by their plain language, the allegations of paragraphs 84 through 86 and paragraphs 96 through 98 challenge the "TMDL procedure," (SAC 84-86, 96-98); Plaintiffs' challenge to EPA's approval of the State Trash TMDLs is set out in paragraph 87, (*see id.* P87), the justiciability of which challenge is discussed in Part III.C of this Order, *infra*. Plaintiffs do not demonstrate how the "procedure" is "the whole or a part of any agency rule, order, license, sanction, relief, or the equivalent or denial thereof, or failure to act" or falls within any other definition, statutory or otherwise, of final agency action. [15] Indeed, as Defendants also correctly note, (*see* [**33] Defs.' Reply Br. at 4-5), Plaintiffs' assertion that the TMDL procedure *consummated in* final agency action, namely EPA's approval of the State Trash TMDLs, is an implicit admission that the "procedure" itself is not final agency action. Nor do Plaintiffs make any effort to distinguish or refute any of the authorities cited by Defendants in support of their arguments. Finally, as Defendants yet again correctly point out, Plaintiffs' mootness argument is nonresponsive because Defendants do not contend that this claim is moot. (*Id.* at 8.) [16]

15 Even though the Court has not been able to locate a statutory definition of "agency action" for purposes of the RFA and SBREFA, Plaintiffs have put forward no argument to suggest that it should be given a meaning substantially different than that provided in the APA. The Court sees no reason to conclude that "agency action" should be given a significantly more expansive definition than that provided for purposes of the APA.

16 Plaintiffs do not respond to Defendants' argument that judicial review is unavailable under the RFA, as amended by the SBREFA, for alleged violations of 5 U.S.C. § 603. (Mot. to Dismiss at 18.) The Court agrees with Defendants that the implication of this lack of response is that any opposition to this argument is waived. (*See* Defs.' Reply Br. at 3-4.) The Court disagrees with Defendants, however, that Plaintiffs have failed to respond to Defendants' arguments that the *de facto* TMDL procedure does not constitute "final agency action" under the RFA, as amended by the SBREFA; but the Court finds their response to this argument meritless for the reasons stated above.

[**34] In sum, it is apparent that the alleged *de facto* TMDL procedure, consisting of the various events identified in paragraph 85 of the SAC, is not subject to challenge under the APA, RFA, or SBREFA because it is not final agency action within the meaning of those statutes. *Cf. Lujan v. Nat'l Wildlife Fed'n*, 497 U.S. 871, 890, 111 L. Ed. 2d 695, 110 S. Ct. 3177 (1990) (rejecting challenge to alleged land withdrawal [*1155] review program on grounds that alleged program was not final agency action within meaning of APA). Accordingly, the Court GRANTS Defendants' motion to dismiss pursuant to Federal Rule of Civil Procedure 12(b)(6) with respect to claim (4) within the First Claim for Relief, (SAC PP84-86). The Court also GRANTS Defendants' motion pursuant to Rule 12(b)(6) with regard to the Second Claim for Relief. Given that the Second Claim for Relief challenges the validity of the EPA Trash TMDLs and the alleged *de facto* TMDL procedure alone, and given that Plaintiffs have withdrawn their challenge to the validity

of the EPA Trash TMDLs, the Second Claim for Relief is now dismissed in its entirety.

It is further evident that Plaintiffs cannot amend the SAC to allege [**35] facts sufficient to rehabilitate these claims because they are not actionable as a matter of law. Accordingly, both claim (4) within the First Claim for Relief and the Second Claim for Relief are DISMISSED WITHOUT LEAVE TO AMEND and WITH PREJUDICE.

C. Ripeness of Plaintiffs' Challenge to EPA's Approval of State Trash TMDLs

Plaintiffs' remaining claim (aside from the Third Claim for Relief, which is dependent on the First and Second Claims for Relief) challenges the merits of EPA's approval of the State Trash TMDLs. (*See id.* P87.) Defendants move to dismiss this claim as unripe for judicial review. Specifically, Defendants contend that the issues are not yet sufficiently developed to be fit for judicial review under the APA because Plaintiffs' existing NPDES permit imposes no obligations on Plaintiffs in connection with the State Trash TMDLs and because the Los Angeles Regional Board intends to revisit these TMDLs at the end of the monitoring period. (Mot. to Dismiss at 21-23.) Defendants further contend that Plaintiffs will not suffer any immediate hardship if review is withheld because EPA's approval of the State Trash TMDLs imposes no present, affirmative duties on [**36] Plaintiffs and requires no immediate changes in Plaintiffs' conduct. (*Id.* at 23-24.)

Plaintiffs respond by arguing that they have suffered "injury in fact," both economic and non-economic. (Pls.' Opp. Br. at 16-17.) Citing to the text of the State Trash TMDLs, a copy of which is appended to the Declaration of Richard Montevideo in Support of Plaintiffs' Motion for Summary Adjudication of Issues, and in Opposition to Defendants' Motion to Dismiss (the "Montevideo Declaration") as Exhibit 3, Plaintiffs claim that they are impacted by these TMDLs:

> By the terms of the TMDL itself, most Plaintiffs are directly impacted by its terms and presently have express monitoring obligations to comply with, not to mention pending compliance dates requiring annual reductions in trash. Moreover, the TMDL calls out very specific and expensive implementation measures, including possible implementation through full capture vortex systems totaling $ 109.3 million for all affected entities within the County [of Los Angeles] by the end of Year 1, and a total of $ 2,053,100,000 for the first 12 years of implementation. Even the Trash TMDL itself concludes that "Trash abatement in the Los Angeles [**37] River system may be expensive."

(Pls.' Opp. Br. at 18 (citing Montevideo Decl., Ex. 3 (State Trash TMDLs)) (internal citations and emphasis omitted).) Similarly, Plaintiffs maintain that "to come into compliance by the Compliance Dates, [they] must begin employing strategies now to meet the progressive reductions in Waste Load Allocations required by the State Trash TMDL[s]." (*Id.* at 19.) [*1156] Plaintiffs further allege that the NPDES permit that applies to all of Plaintiffs provides that the State Trash TMDLs are "effective and enforceable." (*Id.* at 18 (citing Montevideo Decl., Ex. 5, at 10 P14).) Citing paragraph 36 of the SAC, they also contend that they have suffered from the TMDLs' being in effect because they are exposed to "unwarranted enforcement action and third party citizen suits." (*Id.*) Finally, Plaintiffs contend that they have suffered "procedural injuries," to wit, their being "forced to submit comments to two different levels of government (the State of California and the EPA) on two sets of TMDL over a series of many months and several hearings." (*Id.* at 20.)

Defendants dispute all of Plaintiffs' arguments in their reply. Defendants note that [**38] "Plaintiffs point to no present effect of the TMDLs on their day-to-day conduct." (Defs.' Reply Br. at 12.) They point out that, contrary to Plaintiffs' contention, Plaintiffs in fact have no monitoring obligations with which to comply because the Los Angeles County Department of Public Works has assumed that responsibility for all of Plaintiffs. (*Id.*) Defendants clarify that the first compliance date under the TMDLs is not until 2006, and the TMDLs identify several potential compliance options without mandating the use of any particular measure. (*Id.*) They further note that Plaintiffs fail to respond to the record evidence that the Los Angeles Regional Board will revisit the TMDLs at the conclusion of the monitoring period, that is, prior to the first compliance deadline, and that such reconsideration has been considered a rational basis for delaying judicial review. (*Id.* at 13 (citing *Ohio Forestry Ass'n v. Sierra Club*, 523 U.S. 726, 735, 140 L. Ed. 2d 921, 118 S. Ct. 1665 (1998), and *Municipality of Anchorage v. United States*, 980 F.2d 1320, 1323 (9th Cir. 1992)).) Finally, Defendants assail Plaintiffs' reliance on the aforementioned [**39] statement in Plaintiffs' NPDES permit because this statement does not establish that the State Trash TMDLs are effective or enforceable against *Plaintiffs. (Id.)*

[HN7]The "ripeness doctrine is drawn both from Article III limitations on judicial power and from prudential

reasons for refusing to exercise jurisdiction." *Reno v. Catholic Social Services, Inc.*, 509 U.S. 43, 57 n.18, 125 L. Ed. 2d 38, 113 S. Ct. 2485 (1993). Unripe claims are subject to dismissal for lack of subject matter jurisdiction. *See Ass'n of Am. Med. Colleges v. United States*, 217 F.3d 770, 784 n.9 (9th Cir. 2000). In determining whether a case is ripe for review, a court must consider two main issues: "the fitness of the issues for judicial decision" and "the hardship to the parties of withholding court consideration." *Abbott Labs. v. Gardner*, 387 U.S. 136, 149, 18 L. Ed. 2d 681, 87 S. Ct. 1507 (1967). To address these issues in the context of a challenge to the lawfulness of administrative action, the Supreme Court has identified three factors to consider: "(1) whether delayed review would cause hardship to the plaintiffs; (2) whether judicial intervention would inappropriately interfere with further [**40] administrative action; and (3) whether the courts would benefit from further factual development of the issues presented." *Ohio Forestry Ass'n, Inc. v. Sierra Club*, 523 U.S. 726, 733, 140 L. Ed. 2d 921, 118 S. Ct. 1665 (1998).

In light of these three factors, the Court finds this claim unripe for review. First, delayed review would cause, at most, minimal hardship to the parties. Indeed, Plaintiffs have not demonstrated that they will suffer *any* hardship if review is delayed. Despite their preoccupation with various official pronouncements that the State Trash TMDLs are "effective" and "enforceable," Plaintiffs cannot point to a single future event or condition that is fairly certain to occur and will adversely [*1157] impact *Plaintiffs* themselves. [17] That is because the TMDLs do not presently impose any obligations on Plaintiffs and because they are subject to revision before such obligations will be imposed. Nor do Plaintiffs provide any evidence or explanation whatever of the "unwarranted enforcement action and third party citizen suits" to which they claim to be exposed.

> 17 The Court notes parenthetically that Plaintiffs' invocation of "injury in fact" in their opposition brief, (Pls.' Opp. Br. at 16-17), is inapposite. [HN8]Injury-in-fact is a concept that relates to the issue of standing, not ripeness. *See Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560-61, 119 L. Ed. 2d 351, 112 S. Ct. 2130 (1992). Plaintiffs appear to confuse Defendants' arguments as relating to standing, not ripeness. (Pls.' Opp. Br. at 20 ("Federal courts have long recognized procedural injuries, as well as actual injuries, as an alternative basis for standing.").) Nevertheless, the Court construes Plaintiffs' allegations of "injury in fact" as allegations of hardship.

[**41] Equally unsupported is Plaintiffs' contention that they will bear economic costs in complying with the State Trash TMDLs. The sole evidentiary basis of this allegation, set out in paragraph 35 of the SAC and discussed more thoroughly in Plaintiffs' Opposition, is the estimates provided in the text of the TMDLs themselves. (*See* SAC P35; Pls.' Opp. Br. at 18.) But this matter is inadmissible hearsay because it is offered by an out-of-court declarant, *i.e.*, the Los Angeles Regional Board, for the truth of the matter stated, *i.e.*, that the TMDLs will in fact impose these costs. [18] Yet even if this evidence were admissible, it would be insufficient to support Plaintiffs' contention that they will suffer economic injury: the cited portions of the State Trash TMDLs provide estimates of costs to be borne by "permittees"; there is no indication that these costs will be borne by *Plaintiffs* in particular. (*See* Montevideo Decl., Ex. 3, at 37, 40, *cited in* Pls.' Opp. Br. at 18.) Similarly, Plaintiffs provide no evidentiary support for the bald contention in their opposition brief that *Plaintiffs* must begin employing "strategies" now to meet the progressive reductions [**42] in wasteload allocations required by the State Trash TMDLs. (Pls.' Opp. Br. at 19.)

> 18 The author of the State Trash TMDLs appears to be the Los Angeles Regional Board. (*See* Montevideo Decl., Ex. 3.) Since the Los Angeles Regional Board is an entity created by state law and is subordinate to a state agency, the State Board, the text of the State Trash TMDLs is arguably ascribable to the State Board and the state of California as well.
>
> But these statements cannot be attributed to EPA by virtue of its approval of the State Trash TMDLs. Plaintiffs have laid no legal or evidentiary foundation tending to show that EPA's mere approval of the *TMDLs themselves* implies that EPA further agreed with or endorsed as accurate California's estimates of the costs of compliance provided with those TMDLs.

Even if Plaintiffs will be forced to comply with obligations imposed by the State Trash TMDLs and will suffer costs therefrom, the first Compliance Point is not until Year 3 of the implementation period, which runs [**43] from October 1, 2005, to September 30, 2006. (*See* Montevideo Decl., Ex. 3, at 28.) Thus, as a practical matter, Plaintiffs have three years to reach the specified Compliance Point. They have "ample opportunity later to bring [their] legal challenge at a time when harm is more imminent and more certain." *Ohio Forestry Ass'n*, 523 U.S. at 734. Accordingly, Plaintiffs cannot be heard to complain that they will suffer hardship if review is withheld at the present time. [19]

> 19 To the extent that Plaintiffs identify past events that are not alleged to recur in the future,

such as Plaintiffs' allegedly having to submit comments to two levels of government, for the purpose of demonstrating hardship, those events are irrelevant because Plaintiffs are solely seeking *prospective* relief (aside from attorney's fees and costs of suit).

[*1158] Second, judicial intervention would likely interfere with further administrative action on the part of the state of California. Plaintiffs have not refuted Defendants' [**44] evidence that the Los Angeles Regional Board will be revisiting the State Trash TMDLs at the end of the monitoring period. [20] It is thus possible that the compliance [*1159] dates or compliance points will be altered or abolished altogether. The State Board may submit new TMDLs to EPA for review and potential approval well before the compliance dates in the State Trash TMDLs. And even if the State Trash TMDLs remain mostly intact, it is certainly possible that the State Board will approve additional regulations that alleviate much of the burden on Plaintiffs. Again, Plaintiffs must bear in mind that it is the state of California, not the federal government, that is charged with implementing the State Trash TMDLs.

20 Plaintiffs' Objections challenge the admissibility of, *inter alia*, the portion of Defendants' evidence tending to show that the Los Angeles Regional Board will be revisiting the State Trash TMDLs at the end of the monitoring period, namely relevant statements in paragraphs 6 and 12 of the Dickerson Declaration. (The statements in paragraph 7 of the Dickerson Declaration and Exhibit C thereto also constitute such evidence, (*see* Mot. to Dismiss at 22), although Plaintiffs do not object to those statements.)

Plaintiffs challenge the statements in paragraph 6 of the Dickerson Declaration on five grounds. First, Plaintiffs contend that these statements are irrelevant "to the issue in question." (Pls.' Objections at 3.) The Court is unclear about what Plaintiffs mean by "the issue in question," but at any rate, the Court overrules this objection because these statements are indeed relevant to an important issue relating to ripeness: whether the Los Angeles Regional Board will revisit the State Trash TMDLs at the end of the monitoring period. Second, Plaintiffs assert that the statements are inadmissible hearsay because they seek "to introduce statements from parties other than the declarant, into evidence." (*Id.*) This argument fails because the statements are not offered for the truth of the matter stated by persons or parties other than Mr. Dickerson. That the Los Angeles Regional Board's *discussed (i.e.*, verbally articulated) the possibility of reopening the TMDLs in the future does not implicate hearsay concerns, *see* United States v. Ballis, 28 F.3d 1399, 1405 (5th Cir. 1994); and the board's orders to its staff are more akin to written or verbal acts.

Third, Plaintiffs assail the statements as "incompetent" because "the opinions and views of individual Regional Board members is [*sic*] not relevant or admissible evidence of the actions or positions of the entire Board." (Pls.' Objections at 3 (emphasis omitted).) But nowhere are the "opinions and views" of the individual Regional Board members set out in the statements in paragraph 6. Fourth, Plaintiffs claim that these statements are "not the best evidence of the position of the entire Regional Board, as the views and positions of an entire Board can only be discerned from the meeting minutes and resolutions which confirm the actions of the public body." (*Id.* (emphasis omitted).) But the "views and positions" of the board are not set out therein. Fifth, Plaintiffs argue that the statements should be excluded as "extra-record evidence." This objection is meritless because the statements are relevant to the ripeness of Plaintiffs' challenge to EPA's approval of the State Trash TMDLs, and the Court may appropriately look beyond the pleadings in evaluating a motion to dismiss pursuant to Rule 12(b)(1).

In sum, Plaintiffs appear to have construed the statements in paragraph 6 of the Dickerson Declaration as stating that the Los Angeles Regional Board intends to *revise* the State Trash TMDLs after completion of the monitoring period, and they have evidently made their objections with this understanding in mind. Careful review of these statements reveals, however, that these statements demonstrate only that board staff have been ordered to report on the TMDLs and make recommendations on whether or not to revise the TMDLs based on the result of the monitoring. Thus, the import of the statements in paragraph 6 is that *the board will be in a position to revisit, and potentially reconsider, the TMDLs at the end of the monitoring period*, not that they have actually decided to revise the TMDLs. Accordingly, and for the reasons stated above, the Court OVERRULES the objections under heading II.1 in Plaintiffs' Objections.

Although Plaintiffs have objected to the admissibility of the statements in paragraph 12 of the Dickerson Declaration, the Court does not rely on those statements in evaluating issues of ripeness. The Court finds that the statements in

paragraphs 6 and 7 of the Dickerson Declaration are sufficient to support a conclusion that the Los Angeles Regional Board will be revisiting--which is not to be confused with an intent to revise--the State Trash TMDLs at the end of the monitoring period. Accordingly, the Court OVERRULES AS MOOT the objections under heading II.5 in Plaintiffs' Objections.

Finally, the Court has reviewed the remaining objections in Plaintiffs' Objections. The Court does not rely on any of the matter to which Plaintiffs have objected other than those under headings II.1 and II.2 in evaluating the Motion to Dismiss. Accordingly, the Court OVERRULES AS MOOT the remaining objections in Plaintiffs' Objections.

[**45] Finally, the Court would benefit from further factual development of the issues presented. For example, Plaintiffs allege that in approving the State Trash TMDLs, EPA failed "to use 'best science' and [failed] to carefully consider suggestions on how to structure the TMDL program to be more effective and flexible to ensure workable solutions, with such failure resulting in an inequitable share of the burden [of pollution reduction] being placed on municipalities, such as Plaintiffs herein, to attain water quality standards." (SAC P47.) Since TMDLs are not self-executing, but require issuance of state regulations for implementation, delaying review will enable the Court to determine more easily and accurately whether the TMDL program could in fact have been structured more flexibly and whether Plaintiffs are bearing an inequitable share of the burden of pollution reduction.

In light of the Court's evaluation of the foregoing three factors, the Court concludes that Plaintiffs' claim is unripe for judicial review. Accordingly, Plaintiffs' claim (5) within the First Claim for Relief, (*id.* P87), is DISMISSED pursuant to Rule 12(b)(1) due to the Court's lack of subject matter jurisdiction. [**46] Since the Court lacks jurisdiction over this claim, it lacks authority to grant Plaintiffs leave to amend the claim; accordingly, the claim is dismissed WITHOUT LEAVE TO AMEND in this action. Finally, because the Court necessarily does not reach the merits of the claim, the dismissal is WITHOUT PREJUDICE.

D. *Third Claim for Relief*

Plaintiffs' Third Claim for Relief is wholly predicated on their first two claims for relief. Because these two claims for relief are dismissed, the Third Claim for Relief is DISMISSED on the same bases, and to the same extent, as the two claims (and sub-claims thereunder) are dismissed.

E. *Motion for Partial Summary Judgment*

Plaintiffs' Motion for Partial Summary Judgment seeks summary judgment in Plaintiffs' favor on the issues of (1) whether Defendants had authority and jurisdiction to approve the State Trash TMDLs to the extent that they covered unlisted waters and (2) whether Defendants had authority and jurisdiction to approve the State Trash TMDLs given that they had previously established the EPA Trash TMDLs. For the reasons stated above, the Court grants the Motion to Dismiss. Accordingly, the Motion for Partial Summary Judgment [**47] is DENIED AS MOOT. For the same reason, the Court OVERRULES AS MOOT Intervenors' Evidentiary Objections to Declaration of Richard Montevideo in Support of Plaintiffs' Motion for Summary Adjudication of Issues, and in Opposition to Defendants' Motion to Dismiss [21] and Plaintiffs' Objections to [*1160] Declaration of Anjali I. Jaiswal and Exhibits.

21 Although the Montevideo Declaration relates both to Plaintiffs' opposition to the Motion to Dismiss and to Plaintiffs' Motion for Partial Summary Judgment, Intervenors' objections to the Montevideo Declaration are made in connection with their opposition to the Motion for Partial Summary Judgment. Accordingly, the Court considers their objections solely for that purpose.

IV. CONCLUSION

Plaintiffs have no reason or right to be before this Court, at least at this time. All of their claims are moot, meritless, or unripe. Plaintiffs' challenges to the EPA Trash TMDLs were quite obviously mooted out the minute that EPA approved the State Trash TMDLs. Indeed, given [**48] that Plaintiffs readily withdrew these challenges based solely on Defendants' representations in their moving papers that the EPA Trash TMDLs are void, (Pls.' Opp. Br. at 4 n.6), the Court wonders why Plaintiffs proceeded to file a lawsuit on this basis. Plaintiffs' challenge to EPA's authority to approve the State Trash TMDLs following its establishment of the EPA Trash TMDLs and their challenge to the "*de facto* TMDL procedure" are so patently meritless that the Court fails to understand why Plaintiffs decided to assert these claims in the first place. Finally, Plaintiffs' challenges to the "merits" of the State Trash TMDLs may very well be valid, but in the absence of any indication that they will suffer imminent hardship, these claims are premature.

The Court does not suggest by any means that Plaintiffs have acted in bad faith by continuing to prosecute this action after EPA approved the State Trash TMDLs. But after receiving Defendants' opening brief for their Motion to Dismiss, Plaintiffs should have recognized

that their claims could not be maintained at present, if at all. The arguments in their opposition brief appear to reflect more of a "win at all costs" approach than [**49] considered judgment. And while the Court does not doubt that Plaintiffs would appreciate a judicial declaration as to the validity of the State Trash TMDLs, the Court lacks jurisdiction to grant such relief where Plaintiffs are not in jeopardy of imminent harm and future events could obviate the controversy.

Accordingly,

IT IS HEREBY ORDERED THAT:

1. The Motion to Dismiss Second Amended Complaint [Docket No. 18] is GRANTED, such that:

a. The First Claim for Relief in the Second Amended Complaint for Injunctive and Declaratory Relief is DISMISSED, as follows:

i. The claim that EPA acted without authority and acted arbitrarily and capriciously by establishing the EPA Trash TMDLs prior to receiving for review the State Trash TMDLs, (SAC PP78-79), is DISMISSED WITHOUT LEAVE TO AMEND and WITH PREJUDICE as moot and, thus, for lack of subject matter jurisdiction;

ii. The claim that EPA acted without authority and arbitrarily and capriciously by reviewing and approving the State Trash TMDLs because EPA had already established the EPA Trash TMDLs, (SAC PP80, 83), is DISMISSED WITHOUT LEAVE TO AMEND and WITH PREJUDICE for failure to state a claim upon which relief [**50] can be granted;

iii. The claim that EPA acted arbitrarily and capriciously and in excess of its jurisdiction with regard to the manner by which it established the EPA Trash TMDLs, (SAC PP81-82), is DISMISSED WITHOUT LEAVE TO AMEND and [*1161] WITH PREJUDICE as moot and, thus, for lack of subject matter jurisdiction;

iv. The claim that the collective actions of California and EPA relating to issuance of the EPA Trash TMDLs and subsequent approval of the State Trash TMDLs constitute a "*de facto* TMDL procedure" that is arbitrary, capricious, and contrary to law, (SAC PP84-86), is DISMISSED WITHOUT LEAVE TO AMEND and WITH PREJUDICE for failure to state a claim upon which relief can be granted;

v. The claim that EPA acted arbitrarily and capriciously by approving the State Trash TMDLs because those TMDLs were "patently defective" and established not in accordance with the procedures of the CWA and California law, (SAC P87), is DISMISSED WITHOUT LEAVE TO AMEND in this action and WITHOUT PREJUDICE as unripe and, thus, for lack of subject matter jurisdiction;

b. The Second Claim for Relief in the Second Amended Complaint for Injunctive and Declaratory Relief is DISMISSED, as [**51] follows:

i. To the extent the Second Claim for Relief challenges the validity of the EPA Trash TMDLs, the claim is DISMISSED

WITHOUT LEAVE TO AMEND and WITH PREJUDICE as moot and, thus, for lack of subject matter jurisdiction;

ii. To the extent the Second Claim for Relief challenges the validity of the alleged *de facto* TMDL procedure, the claim is DISMISSED WITHOUT LEAVE TO AMEND and WITH PREJUDICE for failure to state a claim upon which relief can be granted;

c. The Third Claim for Relief in the Second Amended Complaint for Injunctive and Declaratory Relief is DISMISSED on the same bases, and to the same extent, as the First and Second Claims for Relief are dismissed, given that the Third Claim for Relief is derivative of the first two claims.

2. Plaintiffs' Motion for Summary Adjudication of Issues [Docket No. 28] is DENIED AS MOOT.

3. Plaintiffs' Objections to Declarations of David W. Smith and Dennis Dickerson Offered by Defendants in Support of Defendants' Motion to Dismiss Second Amended Complaint [Docket No. 31] are OVERRULED on the merits with respect to the objections under headings II.1 and II.2 therein and OVERRULED AS MOOT with respect [**52] to all remaining objections.

4. Intervenors' Evidentiary Objections to Declaration of Richard Montevideo in Support of Plaintiffs' Motion for Summary Adjudication of Issues, and in Opposition to Defendants' Motion to Dismiss [Docket No. 43] are OVERRULED AS MOOT.

5. Plaintiffs' Objections to Declaration of Anjali I. Jaiswal and Exhibits [Docket No. 47] are OVERRULED AS MOOT.

IT IS FURTHER ORDERED THAT this action is DISMISSED in its entirety. The Clerk shall enter judgment in favor of defendants accordingly. All deadlines and events presently calendared are VACATED. [*1162] The Clerk shall close the file and terminate any pending matters.

IT IS SO ORDERED.

Dated: May 16, 2003

SAUNDRA BROWN ARMSTRONG

United States District Judge

JUDGMENT

In accordance with the Court's Order Granting Defendants' Motion to Dismiss, Denying as Moot Plaintiffs' Motion for Partial Summary Judgment, and Dismissing Action,

IT IS HEREBY ORDERED THAT judgment is entered in favor of defendants and defendants-intervenors, and against plaintiffs, on all of plaintiffs' claims for relief as follows:

1. The First Claim for Relief in the Second Amended Complaint for Injunctive and [**53] Declaratory Relief ("SAC") is DISMISSED, such that:

a. The claim that EPA acted without authority and acted arbitrarily and capriciously by establishing the EPA Trash TMDLs prior to receiving for review the State Trash TMDLs, (SAC PP78-79), is DISMISSED WITH PREJUDICE;

b. The claim that EPA acted without authority and arbitrarily and capriciously by reviewing and approving the State Trash TMDLs because EPA had already established the EPA Trash TMDLs, (SAC PP80, 83), is DISMISSED WITH PREJUDICE;

c. The claim that EPA acted arbitrarily and capri-

ciously and in excess of its jurisdiction with regard to the manner by which it established the EPA Trash TMDLs, (SAC PP81-82), is DISMISSED WITH PREJUDICE;

d. The claim that the collective actions of California and EPA relating to issuance of the EPA Trash TMDLs and subsequent approval of the State Trash TMDLs constitute a "*de facto* TMDL procedure" that is arbitrary, capricious, and contrary to law, (SAC PP84-86), is DISMISSED WITH PREJUDICE;

e. The claim that EPA acted arbitrarily and capriciously by approving the State Trash TMDLs because those TMDLs were "patently defective" and established not in accordance [**54] with the procedures of the CWA and California law, (SAC P87), is DISMISSED WITHOUT PREJUDICE;

2. The Second Claim for Relief in the Second Amended Complaint for Injunctive and Declaratory Relief is DISMISSED WITH PREJUDICE in its entirety; and

3. The Third Claim for Relief in the Second Amended Complaint for Injunctive and Declaratory Relief is DISMISSED to the same extent as the First and Second Claims for Relief are dismissed.

IT IS SO ORDERED.

Dated: May 16, 2003

SAUNDRA BROWN ARMSTRONG

United States District Judge

TAB "2"

Arkansas, et al., Petitioners v. Oklahoma, et al.,; and Environmental Protection Agency, Petitioner v. Oklahoma, et al.

No. 90-1262

SUPREME COURT OF THE UNITED STATES

503 U.S. 91; 112 S. Ct. 1046; 117 L. Ed. 2d 239; 1992 U.S. LEXIS 1373; 60 U.S.L.W. 4176; 34 ERC (BNA) 1193; 92 Cal. Daily Op. Service 1587; 92 Daily Journal DAR 2560; 22 ELR 20552; 6 Fla. L. Weekly Fed. S 1

December 11, 1991, Argued
February 26, 1992, Decided *

* Together with No. 90-1266, Environmental Protection Agency v. Oklahoma et al., also on certiorari to the same court.

PRIOR HISTORY: ON WRITS OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE TENTH CIRCUIT.

DISPOSITION: 908 F.2d 595, reversed.

CASE SUMMARY:

PROCEDURAL POSTURE: Petitioners, Arkansas and Environmental Protection Agency (EPA), sought review of a decision of the United States Court of Appeals for the Tenth Circuit, which reversed the EPA's issuance of a discharge permit to Arkansas pursuant to the Clean Water Act, 33 U.S.C.S. § 1251 et seq., and rendered judgment in favor of respondent Oklahoma.

OVERVIEW: Arkansas sought a discharge permit from the EPA, which was for a new point source in Arkansas, 39 miles upstream from Oklahoma's state line. The EPA issued the permit. Oklahoma challenged the permit before the EPA, on grounds that the discharge violated Oklahoma's water quality standards. The trial court affirmed the issuance of the permit, but the court of appeals reversed. On certiorari, the Court reversed and held that when a new permit was being issued by the source state's permit-granting agency, the downstream state did not have the authority to block the issuance of the permit if it was dissatisfied with the proposed standards. The Court further held that an affected state's only recourse was to apply to the EPA Administrator, who then had the discretion to disapprove the permit if he concluded that the discharges would have an undue impact on interstate waters, pursuant to 33 U.S.C.S. § 1342(d)(2). Finally, the Court stated that the Clean Water Act made it clear that affected states occupied a subordinate position to source states in the federal regulatory program.

OUTCOME: The Court reversed the denial of the discharge permit in favor of Arkansas.

CORE TERMS: water quality, river, effluent, issuance, downstream, pollution, Clean Water Act, point source, interstate, detectable, plant, lake, degradation, recommendation, stream, license, border, federal law, body of water, reasonable exercise, substantial evidence, arbitrary and capricious, promulgated, designated, phosphorus, authorize, degraded, nuisance, eutrophication, federal common law

LexisNexis(R) Headnotes

Environmental Law > Water Quality > General Overview
[HN1]See 33 U.S.C.S. § 1370.

Environmental Law > Federal & State Interrelationships > Federal Preemption
Environmental Law > Water Quality > General Overview
[HN2]The Clean Water Act, 33 U.S.C.S. § 1251 et seq., preempts an action based on the law of the affected state and that the only state law applicable to an interstate discharge is the law of the state in which the point source is located.

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > General Overview
[HN3]When a new permit is being issued by the source state's permit-granting agency, the downstream state does not have the authority to block the issuance of the permit if it is dissatisfied with the proposed standards. An affected state's only recourse is to apply to the Environmental Protection Agency Administrator, who then has the discretion to disapprove the permit if he concludes that the discharges will have an undue impact on interstate waters. 33 U.S.C.S. § 1342(d)(2). Thus the Clean Water Act, 33 U.S.C.S. § 1251 et seq., makes it clear that affected states occupy a subordinate position to source states in the federal regulatory program.

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > Effluent Limitations
Environmental Law > Water Quality > Clean Water Act > Water Quality Standards
[HN4]If the Environmental Protection Agency (EPA) recommends changes to the standards and the state fails to comply with that recommendation, the Clean Water Act, 33 U.S.C.S. § 1251 et seq., authorizes the EPA to promulgate water quality standards for the state. 33 U.S.C.S. § 1313(c).

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > General Overview
[HN5]Section 402(b) of the Clean Water Act authorizes each state to establish its own permit program for discharges into navigable waters within its jurisdiction. 33 U.S.C.S. § 1342(b). Although these provisions do not authorize the downstream state to veto the issuance of a permit for a new point source in another state, the Administrator retains authority to block the issuance of any state-issued permit that is outside the guidelines and requirements of the Act. 33 U.S.C.S. § 1342(d)(2).

Environmental Law > Water Quality > General Overview
[HN6]See 33 U.S.C.S. § 1342(b).

Environmental Law > Water Quality > Ocean Dumping
[HN7]See 33 U.S.C.S. § 1442(d)(2).

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > State Water Quality Certifications
[HN8]In the absence of an approved state program, the Environmental Protection Agency (EPA) may issue a National Pollution Discharge Elimination System permit under 33 U.S.C.S. § 1341(a). The EPA's permit program is subject to the same terms, conditions, and requirements as a state permit program. 33 U.S.C.S. § 1342(a)(3).

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > State Water Quality Certifications
[HN9]See 33 U.S.C.S. § 1341(a)(2).

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > General Overview
Environmental Law > Water Quality > Clean Water Act > Water Quality Standards
[HN10]Environmental Protection Agency regulations have provided that a National Pollution Discharge Elimination System permit shall not be issued when the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected States. 40 C.F.R. § 122.4(d) (1991).

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > General Overview
[HN11]Section 402(a)(2) of the Clean Water Act provides that for Environmental Protection Agency-issued permits the Administrator shall prescribe conditions to assure compliance with the requirements of § 402(a)(1) of the Clean Water Act and such other requirements as he deems appropriate. 33 U.S.C.S. § 1342(a)(2).

Environmental Law > Water Quality > General Overview
[HN12]See 33 U.S.C.S. § 1342(d)(2).

Administrative Law > Judicial Review > Standards of Review > Substantial Evidence

Environmental Law > Litigation & Administrative Proceedings > Judicial Review

[HN13]A court reviewing an agency's adjudicative action should accept the agency's factual findings if those findings are supported by substantial evidence on the record as a whole. The court should not supplant the agency's findings merely by identifying alternative findings that could be supported by substantial evidence.

Administrative Law > Judicial Review > Reviewability > Factual Determinations

Administrative Law > Judicial Review > Standards of Review > Arbitrary & Capricious Review

[HN14]An agency ruling is arbitrary and capricious if the agency has entirely failed to consider an important aspect of the problem.

DECISION:

EPA's issuance of discharge permit to sewage plant, based on finding that discharges would not cause detectable violation of downstream state's water quality standards, held authorized by Clean Water Act.

SUMMARY:

An Arkansas city, in an application to the United States Environmental Protection Agency (EPA), sought a permit for the city's new sewage treatment plant under the National Pollution Discharge Elimination System (NPDES). The EPA, pursuant to 402(a)(1) of the Clean Water Act (33 USCS 1342(a)(1)), issued a permit which (1) authorized the plant to discharge up to half of its effluent into a stream whose waters ultimately entered a river which flowed into Oklahoma, but (2) imposed various conditions, including a provision that the permit would be modified if a pending study determined that more stringent limitations were necessary to insure compliance with Oklahoma's water quality standards. Oklahoma authorities, challenging the permit before the EPA, alleged that the plant's discharge violated Oklahoma standards prohibiting any degradation of water quality in the river in question. An administrative law judge (ALJ) affirmed the issuance of the permit on the ground that the discharge would not have an "undue impact" on Oklahoma waters; but the EPA's Chief Judicial Officer (CJO), remanding for application of a different standard of review, interpreted Oklahoma's ban on degradation of the river in question as allowing the permit to be upheld if the record showed by a preponderance of the evidence that the authorized discharges would not cause an actual detectable violation of Oklahoma water quality standards. On remand, the ALJ made detailed factual findings and determined that the CJO's standard had been met. The CJO sustained the issuance of the permit. However, the United States Court of Appeals for the Tenth Circuit, on judicial review, reversed the issuance of the permit, as the court (1) interpreted the Act as providing that a proposed source may not be permitted where it would discharge effluent that would contribute to conditions currently constituting a violation of applicable water quality standards, (2) found that the river in question was already degraded in water quality and that effluent from the sewage treatment plant could be expected to contribute to the river's ongoing deterioration even though it would not detectably affect water quality, and (3) determined that the EPA's decision was arbitrary and capricious because the EPA had misinterpreted Oklahoma water quality standards and failed to consider the important and relevant fact of the river's degraded status (908 F2d 595).

On certiorari, the United States Supreme Court reversed. In an opinion by Stevens, J., expressing the unanimous view of the court, it was held that the EPA's decision to issue the NPDES permit was authorized by the Clean Water Act, as (1) the Act did not prohibit any discharge of effluent that would reach waters already in violation of existing water quality standards; (2) the CJO's interpretation of the Oklahoma water quality standards was reasonable and consistent with the purposes and principles of the Act, and the EPA's reasonable, consistently held interpretation of the Oklahoma standards was entitled to substantial deference since the standards had been incorporated into EPA regulations, and thus had a federal character at least insofar as they affected the issuance of a permit in another state; (3) the ALJ's findings that the sewage plant discharge would not lead to a detectable change in four primary measures of water quality under the Oklahoma standards were supported by substantial evidence; and (4) although it might arguably be wise to prohibit any discharge into the river in question, it was not arbitrary for the EPA to conclude, given perceived benefits to the river and in Arkansas, that allowing the discharge would be even wiser, and such policy decisions were properly made by the EPA rather than by the courts.

LAWYERS' EDITION HEADNOTES:

[***LEdHN1]

ENVIRONMENTAL LAW §30

Clean Water Act -- discharge permit --

Headnote:[1A][1B][1C][1D][1E]

A decision by the United States Environmental Protection Agency (EPA) to issue a National Pollution Discharge Elimination System (NPDES) permit, pursuant to 402(a)(1) of the Clean Water Act (33 USCS 1341(a)(1)), to an Arkansas city for a sewage treatment plant located

upstream from Oklahoma, based on the EPA's finding that discharges from the new source would not cause a detectable violation of Oklahoma's water quality standards, is authorized by the Act, notwithstanding a Federal Court of Appeals' findings on judicial review that effluent from the plant would reach a river in Oklahoma which was already "degraded" in water quality and that such effluent could be expected to contribute to the deterioration of the river, as (1) the Act does not prohibit any discharge of effluent that would reach waters already in violation of existing water quality standards; (2) the interpretation of the Oklahoma standards by the EPA's Chief Judicial Officer, who ruled that the standard requiring no degradation of the river in question would be violated only if the discharge effected an actual detectable or measurable change in water quality, is reasonable and consistent with the purposes and principles of the Act, and the EPA's reasonable, consistently held interpretation of the Oklahoma standards is entitled to substantial deference, since the standards, at least insofar as they affect the issuance of a permit in another state, have a federal character; (3) an administrative law judge's findings that the sewage plant discharge would not lead to a detectable change in four primary measures of water quality under the Oklahoma standards are supported by substantial evidence; and (4) although it might arguably be wise to prohibit any discharge into the river in question, even if that discharge would have no adverse impact on water quality, it is not arbitrary for the EPA to conclude--given the benefits to the river from the increased flow of relatively clean water and the benefits achieved in Arkansas by allowing the new plant to operate as designed--that allowing the discharge would be even wiser, and such policy decisions are properly made by the EPA rather than by the courts.

[***LEdHN2]

ENVIRONMENTAL LAW §32

Clean Water Act -- state and federal standards --

Headnote:[2]

Water quality standards, which are generally promulgated by the states, supplement the effluent limitations promulgated by the United States Environmental Protection Agency under 301 and 304 of the Clean Water Act (33 USCS 1311, 1314), so that numerous point sources, despite individual compliance with effluent limitations, may be further regulated to prevent water quality from falling below acceptable levels.

[***LEdHN3]

ENVIRONMENTAL LAW §18

scope of judicial review --

Headnote:[3A][3B]

In determining the propriety of the issuance of a discharge permit by the United States Environmental Protection Agency (EPA) to a sewage treatment plant pursuant to 402(a)(1) of the Clean Water Act (33 USCS 1341(a)(1)), it is neither necessary nor prudent for the United States Supreme Court to resolve the question whether the Act requires the EPA, in crafting and issuing a permit to a point source in one state, to apply the water quality standards of a downstream state, where (1) in issuing the permit in question, the EPA assumed that it was obligated by both the Act and its own regulation to insure that the sewage plant discharge would not violate a downstream state's standards, (2) this assumption was permissible and reasonable, and therefore, there is no need for the Supreme Court to address whether the Act requires as much, and (3) much of the analysis and argument in the parties' briefs relied on statutory provisions which govern not only federal permits issued pursuant to 401(a) and 402(a) of the Act (33 USCS 1341(a), 1342(a)), but also state permits issued under 402(b) of the Act (33 USCS 1342(b)), and it would be unwise to evaluate those arguments in a case which involves only a federal permit; the Supreme Court's decision not to determine the scope of the EPA's statutory obligations, however, does not affect the Supreme Court's resolution of a question concerning the EPA's statutory authority to mandate compliance with a downstream state's water quality standards.

[***LEdHN4]

ENVIRONMENTAL LAW §30

Clean Water Act -- discharge permits -- enforcement of state standards --

Headnote:[4A][4B][4C]

The Clean Water Act (33 USCS 1251-1376) does not limit the authority of the United States Environmental Protection Agency (EPA) to mandate that point sources receiving National Pollution Discharge Elimination System (NPDES) permits from the EPA pursuant to 402(a)(1) of the Act (33 USCS 1341(a)(1)) comply with a downstream state's water quality standards; an EPA regulation (40 CFR 122.4(d)) which provides that NPDES permits shall not be issued when the imposition of conditions cannot insure compliance with the applicable water quality requirements of all affected states constitutes a reasonable exercise of the EPA's statutory authority, as (1) the application of state water quality standards in the interstate context is wholly consistent with the Act's broad purpose of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters, and (2) 301(b)(1)(C) of the Act (33 USCS 1311(b)(1)(C)) expressly identifies the achievement of

state water quality standards as one of the Act's central objectives; the EPA's requirement, as a condition of issuing an NPDES permit to an Arkansas sewage treatment plant located upstream from Oklahoma, that the discharge from the plant comply with Oklahoma water quality standards is a reasonable exercise of the EPA's substantial statutory discretion.

[***LEdHN5]

ENVIRONMENTAL LAW §30

Clean Water Act -- discharge permits --

Headnote:[5]

The Administrator of the United States Environmental Protection Agency (EPA) is vested by Congress with (1) broad discretion to establish conditions for National Pollution Discharge Elimination System (NPDES) permits issued by the EPA pursuant to 402(a)(1) of the Clean Water Act (33 USCS 1341(a)(1)), and (2) broad authority to oversee state permit programs.

[***LEdHN6]

ENVIRONMENTAL LAW §30

Clean Water Act -- state and federal authority --

Headnote:[6]

The Clean Water Act (33 USCS 1251-1376) vests in the United States Environmental Protection Agency and in the states broad authority to develop long-range, areawide programs to alleviate and eliminate existing pollution.

[***LEdHN7]

APPEAL §1535

harmless error -- EPA decisions --

Headnote:[7A][7B]

The error of an administrative law judge (ALJ) and of the Chief Judicial Officer of the United States Environmental Protection Agency (EPA) in misinterpreting a provision of Oklahoma's water quality standards as governing only the discharge of phosphorus into lakes, rather than the discharge of phosphorus into lakes and into all perennial and intermittent streams--which misinterpretation was made in the course of a determination that a National Pollution Discharge Elimination System (NPDES) permit was properly issued by the EPA to an Arkansas sewage treatment plant upstream from Oklahoma based on a finding that discharges from the plant would not cause a detectable violation of Oklahoma water quality standards--is harmless, because (1) the ALJ found that the discharge into a particular lake would comply with the Oklahoma phosphorus standard, and (2) it was undisputed that such discharge produced a greater threat to the slow-moving water of the lake than to the rapid flow in an affected river.

[***LEdHN8]

APPEAL §1535

harmless error -- EPA decisions --

Headnote:[8A][8B]

The error of an administrative law judge (ALJ) and of the Chief Judicial Officer of the United States Environmental Protection Agency (EPA) in relying on the 1985 version of Oklahoma's water quality standards, rather than the 1982 version, for purposes of a determination that an Arkansas municipality's 1985 application for a National Pollution Discharge Elimination System (NPDES) permit for a sewage treatment plant located upstream from Oklahoma was properly granted by the EPA based on a finding that discharges from the plant would not cause a detectable violation of Oklahoma water quality standards, is harmless, because the portions of the two versions relevant to the determination did not differ materially.

[***LEdHN9]

ENVIRONMENTAL LAW §18

scope of judicial review --

Headnote:[9A][9B][9C][9D][9E]

A Federal Court of Appeals' determination that the United States Environmental Protection Agency (EPA) acted arbitrarily and capriciously in granting an Arkansas city's 1985 application for a National Pollution Discharge Elimination System (NPDES) permit for a sewage treatment plant located upstream from Oklahoma exceeds the legitimate scope of judicial review of an agency adjudication, in that the Court of Appeals (1) in finding that the EPA had misinterpreted water quality standards promulgated by the state of Oklahoma, failed to give due regard and deference to the EPA's interpretation of its own regulations, as those regulations incorporated the Oklahoma standards by providing (40 CFR 122.4(d)) that NPDES permits shall not be issued when the imposition of conditions cannot insure compliance with the applicable water quality requirements of all affected states; (2) in reviewing the EPA's findings that the sewage plant effluent would not cause a detectable violation of Oklahoma water quality standards, disregarded established standards for reviewing the factual findings of agencies and improperly made its own factual findings by determining that there was substantial evidence to support findings which the Court of Appeals thought were appropriate but

which were contrary to those made by an administrative law judge; and (3) incorrectly concluded that the EPA's decision was arbitrary and capricious due to the EPA's failure to consider the allegedly important and relevant fact that the affected Oklahoma river was, by the Court of Appeals' assessment, already degraded in water quality, a circumstance which was an "important aspect" of the case only because of the Court of Appeals' novel and erroneous interpretation of the controlling law as banning any effluent sources that would contribute to conditions constituting a violation of applicable water quality standards.

[***LEdHN10]

ENVIRONMENTAL LAW §30

Clean Water Act -- incorporating state regulations --

Headnote:[10]

A United States Environmental Protection Agency (EPA) regulation (40 CFR 122.4(d)), which provides that National Pollution Discharge Elimination System permits shall not be issued pursuant to 402(a)(1) of the Clean Water Act (33 USCS 1341(a)(1)) when the imposition of conditions cannot insure compliance with the applicable water quality requirements of all affected states, effectively incorporates into federal law those state-law standards which the EPA determines to be applicable.

[***LEdHN11]

ADMINISTRATIVE LAW §265

judicial review -- factual findings --

Headnote:[11]

A court reviewing an administrative agency's adjudicative action should accept the agency's factual findings if those findings are supported by substantial evidence on the record as a whole; the court should not supplant the agency's findings merely by identifying alternative findings that could be supported by substantial evidence.

[***LEdHN12]

ADMINISTRATIVE LAW §250

judicial review --

Headnote:[12]

An administrative agency ruling is arbitrary and capricious, for purposes of judicial review, if the agency has entirely failed to consider an important aspect of the problem.

SYLLABUS

The Clean Water Act provides for two sets of water quality measures: effluent limitations, which are promulgated by the Environmental Protection Agency (EPA or Agency), and water quality standards, which are promulgated by the States. The Act generally prohibits the discharge of effluent into a navigable body of water unless the point source obtains a National Pollution Discharge Elimination System (NPDES) permit from a State with an EPA-approved permit program or from the EPA itself. A Fayetteville, Arkansas, sewage treatment plant received an EPA-issued permit, authorizing it to discharge effluent into a stream that ultimately reaches the Illinois River upstream from the Oklahoma border. Respondents, Oklahoma and other Oklahoma parties, challenged the permit before the EPA, alleging, *inter alia*, that the discharge violated Oklahoma water quality standards, which allow no degradation of water quality in the upper Illinois River. The EPA's Chief Judicial Officer remanded the initial affirmance of the permit by the Administrative Law Judge (ALJ), ruling that the Act requires an NPDES permit to impose any effluent limitations necessary to comply with applicable state water quality standards, and that those standards would be violated only if the record shows by a preponderance of the evidence that the discharge would cause an actual *detectable* violation of Oklahoma's water quality standards. The ALJ then made detailed findings of fact, concluding that Fayetteville had satisfied the Chief Judicial Officer's standard, and the Chief Judicial Officer sustained the permit's issuance. The Court of Appeals reversed, ruling that the Act does not allow a permit to be issued where a proposed source would discharge effluent that would contribute to conditions currently constituting a violation of applicable water quality standards. It concluded that the Illinois River was already degraded, that the Fayetteville effluent would reach the river in Oklahoma, and that the effluent would contribute to the river's deterioration even though it would not detectably affect the river's water quality.

Held: The EPA's action was authorized by the Clean Water Act. Pp. 98-114.

(a) Where interstate discharge is involved, both federal common law of nuisance, *Milwaukee* v. *Illinois*, 451 U.S. 304, 68 L. Ed. 2d 114, 101 S. Ct. 1784, and an affected State's common law, *International Paper Co.* v. *Ouellette*, 479 U.S. 481, 493, 93 L. Ed. 2d 883, 107 S. Ct. 805, are pre-empted. Affected States may not block a permit, but must apply to the EPA Administrator, who may disapprove a plan if he concludes that the discharge will have an undue impact on interstate waters. *Id.*, at 490-491. Pp. 98-101.

(b) The EPA has construed the Act as requiring that EPA-issued permits comply with the requirements for a permit issued under an approved state plan and with § 401(a) of the Act, which appears to prohibit the issuance of a federal permit over the objection of an affected State unless compliance with the affected State's water quality requirements can be insured. Pp. 101-103.

(c) The EPA's requirement that the Fayetteville discharge comply with Oklahoma's water quality standards is a reasonable exercise of the substantial statutory discretion Congress has vested in the Agency. There is no need to address the question whether the Act requires compliance with affected States' standards, for it clearly does not limit the EPA's authority to mandate such compliance. EPA regulations, which since 1973 have required that an NPDES permit not be issued when compliance with affected States' water quality standards cannot be insured, are a reasonable exercise of the Agency's discretion and are a well-tailored means of reaching the Act's goal of achieving state water quality standards. The EPA's authority is not constrained by the limits in *Ouellette, supra*, concerning an affected State's direct input into the permit process, does not conflict with the Act's legislative history and statutory scheme, and is not incompatible with the balance among competing policies and interests that Congress struck in the Act. Pp. 104-107.

(d) Contrary to the Court of Appeals' interpretation, nothing in the Act mandates a complete ban on discharges into a waterway that is in violation of existing water quality standards. Instead, the Act vests in the EPA and the States broad authority to develop long-range, areawide programs to alleviate and eliminate existing pollution. Pp. 107-108.

(e) The Court of Appeals exceeded the legitimate scope of judicial review of an agency adjudication when it invalidated the EPA's issuance of the permit on the ground that the Agency misinterpreted Oklahoma's water quality standards. It substituted its own reading of the law for the EPA's. Thus, it failed to give substantial deference to the Agency's reasonable, consistently held interpretation of its own regulations, which incorporate the Oklahoma standards. It also disregarded well-established standards for reviewing factual findings of agencies by making its own factual findings when the ALJ's findings were supported by substantial evidence. See generally *Universal Camera Corp. v. NLRB*, 340 U.S. 474, 95 L. Ed. 456, 71 S. Ct. 456. As a result, the court's conclusion that the river's degradation was an important and relevant factor which the EPA failed to consider was based on its own erroneous interpretation of the controlling law. Had it been properly respectful of the EPA's permissible reading of the Act -- that what matters is not the river's current status, but whether the proposed discharge will have a detectable effect on that status -- it would not have adjudged the Agency's decision arbitrary and capricious. Pp. 109-114.

COUNSEL: Edward W. Warren argued the cause for petitioners in No. 90-1262. With him on the briefs were Winston Bryant, Attorney General of Arkansas, Mary B. Stallcup, Angela S. Jegley, David G. Norrell, James N. McCord, Walter R. Niblock, and Nancy L. Hamm. Deputy Solicitor General Wallace argued the cause for petitioner in No. 90-1266. With him on the briefs were Solicitor General Starr, Assistant Attorney General Stewart, Harriet S. Shapiro, Michael A. McCord, Anne S. Almy, Gary S. Guzy, and E. Donald Elliott.

Robert A. Butkin, Assistant Attorney General of Oklahoma, argued the cause for respondents in both cases. With him on the brief for respondents State of Oklahoma et al. were Susan B. Loving, Attorney General, Brita Haugland Cantrell, Assistant Attorney General, and Julian Fite. Theodore E. Dinsmoor and Susan Hedman filed a brief for respondent Oklahoma Wildlife Federation. +

+ Briefs of amici curiae urging reversal were filed for the State of Colorado by Gale A. Norton, Attorney General, Raymond T. Slaughter, Chief Deputy Attorney General, Timothy M. Tymkovich, Solicitor General, Martha E. Rudolph, Assistant Attorney General, and Martha Phillips Allbright; for the State of Nevada et al. by Nicholas J. Spaeth, Attorney General of North Dakota, Frankie Sue Del Papa, Attorney General of Nevada, John P. Arnold, Attorney General of New Hampshire, and Mark Barnett, Attorney General of South Dakota; for the Association of Metropolitan Sewerage Agencies et al. by Lee C. White, Benjamin L. Brown, Howard Holme, Don A. Zimmerman, Geoff Wilson, Thomas W. Kelty, James M. Kaup, Fred G. Stickel III, Robert E. Johnson, John E. Gotherman, Mark I. Wallach, Roy D. Bates, Ogden Stokes, Thomas S. Smith, Robert J. Alfton, and John Dodge; for Champion International Corp. et al. by J. Jeffrey McNealey, Michael K. Glenn, Theodore L. Garrett, Corinne A. Goldstein, Charles R. Nestrud, Richard A. Flye, Jerry C. Jones, and Jess Askew III; for the Colorado Water Congress by Mark T. Pifher; and for the Mountain States Legal Foundation et al. by William Perry Pendley.

Briefs of amici curiae urging affirmance were filed for the State of Illinois et al. by Roland W. Burris, Attorney General of Illinois, Rosalyn Kaplan, Solicitor General, and James L. Morgan, Assistant Attorney General, Charles W. Burson,

Attorney General of Tennessee, John Knox Walkup, Solicitor General, and Michael D. Pearigen, Deputy Attorney General, Jimmy Evans, Attorney General of Alabama, Grant Woods, Attorney General of Arizona, Daniel E. Lungren, Attorney General of California, Richard Blumenthal, Attorney General of Connecticut, Charles M. Oberly III, Attorney General of Delaware, Robert A. Butterworth, Attorney General of Florida, Michael E. Carpenter, Attorney General of Maine, and Jon H. Edwards, Assistant Attorney General, Frank J. Kelley, Attorney General of Michigan, Mike Moore, Attorney General of Mississippi, Robert J. Del Tufo, Attorney General of New Jersey, and T. Travis Medlock, Attorney General of South Carolina; for the Cherokee Nation of Oklahoma by Jim Wilcoxen; for the Natural Resources Defense Council et al. by Jessica C. Landman and Mark Van Putten; for the Scenic Rivers Association of Oklahoma et al. by Kathy Carter-White, Joel Glenn Richardson, Harvey Chaffin, and Bill J. Ballard; for the Sierra Club by Stephan C. Volker; for the U. S. Senator from Oklahoma, Don Nickles, et al. by James George Jatras; and for Mike Synar, Member of Congress, pro se.

JUDGES: STEVENS, J., delivered the opinion for a unanimous Court.

OPINION BY: STEVENS

OPINION

[*94] [***247] [**1050] JUSTICE STEVENS delivered the opinion of the Court.

[***LEdHR1A] [1A]Pursuant to the Clean Water Act, 86 Stat. 816, as amended, 33 U. S. C. § 1251 *et seq.*, the Environmental Protection Agency (EPA or Agency) issued a discharge permit to a new point source in Arkansas, about 39 miles upstream from the Oklahoma state line. The question presented in this litigation is whether the EPA's finding that discharges from the new source would not cause a detectable [**1051] violation of Oklahoma's [*95] water quality standards satisfied the EPA's duty to protect the interests of the downstream State. Disagreeing with the Court of Appeals, we hold that the Agency's action was authorized by the statute.

I

In 1985, the city of Fayetteville, Arkansas, applied to the EPA, seeking a permit for the city's new sewage treatment plant under the National Pollution Discharge Elimination System (NPDES). After the appropriate procedures, the EPA, pursuant to § 402(a)(1) of the Act, 33 U. S. C. § 1342(a)(1), issued a permit authorizing the plant to discharge up to half of its effluent (to a limit of 6.1 million gallons per day) into an unnamed [***248] stream in northwestern Arkansas. [1] That flow passes through a series of three creeks for about 17 miles, and then enters the Illinois River at a point 22 miles upstream from the Arkansas-Oklahoma border.

1 The permit also authorized the plant to discharge the remainder of its effluent into the White River, a river that does not flow into Oklahoma; this aspect of the permit is not at issue in this litigation.

The permit imposed specific limitations on the quantity, content, and character of the discharge and also included a number of special conditions, including a provision that if a study then underway indicated that more stringent limitations were necessary to ensure compliance with Oklahoma's water quality standards, the permit would be modified to incorporate those limits. App. 84.

Respondents challenged this permit before the EPA, alleging, *inter alia*, that the discharge violated the Oklahoma water quality standards. Those standards provide that "no degradation [of water quality] shall be allowed" in the upper Illinois River, including the portion of the river immediately downstream from the state line. [2]

2 Section 5 of the Oklahoma water quality standards provides:

"All streams and bodies of water designated as (a) are protected by prohibition of any new point source discharge of wastes or increased load from an existing point source except under conditions described in Section 3.

"All streams designated by the State as 'scenic river areas,' and such tributaries of those streams as may be appropriate will be so designated. Best management practices for control of nonpoint source discharge should be initiated when feasible." App. 46-47.

Oklahoma has designated the portion of the Illinois River immediately downstream from the state line as a "scenic river." Okla. Stat., Tit. 82, § 1452(b)(1) (Supp. 1989); see also App. 54.

Section 3 of the Oklahoma water quality standards provides, in relevant part:

"The intent of the Anti-degradation Policy is to protect all waters of the State from quality degradation. Existing instream water uses shall be

maintained and protected. No further water quality degradation which would interfere with or become injurious to existing instream water uses shall be allowed. Oklahoma's waters constitute a valuable State resource and shall be protected, maintained and improved for the benefit of all the citizens.

. . . .

"No degradation shall be allowed in high quality waters which constitute an outstanding resource or in waters of exceptional recreational or ecological significance. These include water bodies located in national and State parks, Wildlife Refuges, and those designated 'Scenic Rivers' in Appendix A." App. 27-28.

[*96] Following a hearing, the Administrative Law Judge (ALJ) concluded that the Oklahoma standards would not be implicated unless the contested discharge had "something more than a mere *de minimis* impact" on the State's waters. He found that the discharge would not have an "undue impact" on Oklahoma's waters and, accordingly, affirmed the issuance of the permit. App. to Pet. for Cert. in No. 90-1262, pp. 101a-103a (emphasis deleted).

On a petition for review, the EPA's Chief Judicial Officer first ruled that § 301(b)(1)(C) of the Clean Water Act "requires an NPDES permit to impose any effluent limitations necessary to comply with applicable state water quality standards." [3] *Id.*, at 116a-117a. He [**1052] then held that [***249] the Act [*97] and EPA regulations offered greater protection for the downstream State than the ALJ's "undue impact" standard suggested. He explained the proper standard as follows:

> "[A] mere theoretical impairment of Oklahoma's water quality standards -- *i. e.*, an infinitesimal impairment predicted through modeling but not expected to be actually detectable or measurable -- should not by itself block the issuance of the permit. In this case, the permit should be upheld if the record shows by a preponderance of the evidence that the authorized discharges would not cause an actual *detectable* violation of Oklahoma's water quality standards." *Id.*, at 117a (emphasis in original).

3 Section 301(b)(1)(C) provides, in relevant part, that

> "there shall be achieved --
>
> . . . .
>
> "(C) not later than July 1, 1977, any more stringent limitation, including those necessary to meet *water quality standards . . . established pursuant to any State law or regulations* . . . or required to implement any applicable water quality standard established pursuant to this chapter." 33 U. S. C. § 1311(b)(1)(C) (emphasis added).

On remand, the ALJ made detailed findings of fact and concluded that the city had satisfied the standard set forth by the Chief Judicial Officer. Specifically, the ALJ found that there would be no detectable violation of any of the components of Oklahoma's water quality standards. *Id.*, at 127a-143a. The Chief Judicial Officer sustained the issuance of the permit. *Id.*, at 145a-153a.

Both the petitioners in No. 90-1262 (collectively Arkansas) and the respondents in this litigation sought judicial review. [4] Arkansas argued that the Clean Water Act did not require an Arkansas point source to comply with Oklahoma's water quality standards. Oklahoma challenged the EPA's determination that the Fayetteville discharge would not produce a detectable violation of the Oklahoma standards.

4 The Arkansas petition was filed in the Court of Appeals for the Eighth Circuit and transferred to the Tenth Circuit where it was consolidated with the petition filed by the respondents.

The Court of Appeals did not accept either of these arguments. The court agreed with the EPA that the statute required compliance with Oklahoma's water quality standards, [*98] see 908 F.2d 595, 602-615 (CA10 1990), and did not disagree with the Agency's determination that the discharges from the Fayetteville plant would not produce a detectable violation of those standards. *Id.*, at 631-633. Nevertheless, relying on a theory that neither party had advanced, the Court of Appeals reversed the Agency's issuance of the Fayetteville permit. The court first ruled that the statute requires that "where a proposed source would discharge effluents that would contribute to conditions currently constituting a violation of applicable water quality standards, such [a] proposed source may not be permitted." *Id.*, at 620. Then the court found that the Illinois River in Oklahoma was "already degraded," that the Fayetteville effluent would reach the Illinois River in Oklahoma, and that that effluent could "be expected to contribute to the ongoing deterioration of the scenic [Illinois R]iver" in Oklahoma even though it

would not detectably affect the river's water quality. *Id.*, at 621-629.

The importance and the novelty of the Court of Appeals' decision persuaded us to grant certiorari. 499 U.S. 946 (1991). We now reverse.

II

Interstate waters have been a font [***250] of controversy since the founding of the Nation. *E. g., Gibbons* v. *Ogden*, 22 U.S. 1, 9 Wheat. 1, 6 L. Ed. 23 (1824). This Court has frequently resolved disputes between States that are separated by a common river, see, *e. g., Ohio* v. *Kentucky*, 444 U.S. 335, 62 L. Ed. 2d 530, 100 S. Ct. 588 (1980), that border the same body of water, see, *e. g., New York* v. *New Jersey*, 256 U.S. 296, 65 L. Ed. 937, 41 S. Ct. 492 [**1053] (1921), or that are fed by the same river basin, see, *e. g., New Jersey* v. *New York*, 283 U.S. 336, 75 L. Ed. 1104, 51 S. Ct. 478 (1931).

Among these cases are controversies between a State that introduces pollutants to a waterway and a downstream State that objects. See, *e. g., Missouri* v. *Illinois*, 200 U.S. 496, 50 L. Ed. 572, 26 S. Ct. 268 (1906). In such cases, this Court has applied principles of common law tempered by a respect for the sovereignty of the States. Compare *id.*, at 521, with *Georgia* v. *Tennessee Copper Co.*, 206 U.S. 230, 237, 51 L. Ed. 1038, 27 S. Ct. 618 (1907). In forging what "may [*99] not improperly be called interstate common law," *Illinois* v. *Milwaukee*, 406 U.S. 91, 105-106, 31 L. Ed. 2d 712, 92 S. Ct. 1385 (1972) (*Milwaukee I*), however, we remained aware "that new federal laws and new federal regulations may in time pre-empt the field of federal common law of nuisance." *Id.*, at 107.

In *Milwaukee* v. *Illinois*, 451 U.S. 304, 68 L. Ed. 2d 114, 101 S. Ct. 1784 (1981) (*Milwaukee II*), we held that the Federal Water Pollution Control Act Amendments of 1972 did just that. In addressing Illinois' claim that Milwaukee's discharges into Lake Michigan constituted a nuisance, we held that the comprehensive regulatory regime created by the 1972 amendments pre-empted Illinois' federal common law remedy. We observed that Congress had addressed many of the problems we had identified in *Milwaukee I* by providing a downstream State with an opportunity for a hearing before the source State's permitting agency, by requiring the latter to explain its failure to accept any recommendations offered by the downstream State, and by authorizing the EPA, in its discretion, to veto a source State's issuance of any permit if the waters of another State may be affected. *Milwaukee II*, 451 U.S. at 325-326.

In *Milwaukee II*, the Court did not address whether the 1972 amendments had supplanted *state* common law remedies as well as the federal common law remedy. See *id.*, at 310, n. 4. On remand, Illinois argued that § 510 of the Clean Water Act, 33 U. S. C. § 1370, expressly preserved the State's right to adopt and enforce rules that are more stringent than federal standards. [5] The Court of Appeals accepted Illinois' reading of § 510, but held that that section did "no more than [*100] to save the right and jurisdiction [***251] of a state to regulate activity occurring within the confines of its boundary waters." *Illinois* v. *Milwaukee*, 731 F.2d 403, 413 (CA7 1984), cert. denied, 469 U.S. 1196 (1985).

5 [HN1]Section 510 provides in relevant part:

> "Except as expressly provided in this [Act], nothing in this [Act] shall (1) preclude or deny the right of any State or political subdivision thereof or interstate agency to adopt or enforce (A) any standard or limitation respecting discharges of pollutants, or (B) any requirement respecting control or abatement of pollution [with exceptions]; or (2) be construed as impairing or in any manner affecting any right or jurisdiction of the States *with respect to the waters (including boundary waters) of such States*." 33 U. S. C. § 1370 (emphasis added).

This Court subsequently endorsed that analysis in *International Paper Co.* v. *Ouellette*, 479 U.S. 481, 93 L. Ed. 2d 883, 107 S. Ct. 805 (1987), in which Vermont property owners claimed that the pollution discharged into Lake Champlain by a paper company located in New York constituted a nuisance under Vermont law. The Court held [HN2]the Clean Water Act taken "as a whole, its purposes and its history" pre-empted an action based on the law of the affected State and that the only state law applicable to an interstate discharge is "the law of the State in which the point source is located." *Id.*, at 493, 487. Moreover, in reviewing § 402(b) of the Act, the Court pointed out that [HN3]when a new permit is being issued by the source State's permit-granting agency, the downstream State

> " [**1054] does not have the authority to block the issuance of the permit if it is dissatisfied with the proposed standards. An affected State's only recourse is to apply to the EPA Administrator, who then has the discretion to disapprove the permit if he concludes that the discharges will have an undue impact on interstate waters. § 1342(d)(2). . . . Thus the Act makes it clear that affected States occupy a subordinate position to source States in the federal regulatory program." *Id.*, at 490-491. [6]

6 This description of the downstream State's role in the issuance of a new permit by a source State was apparently consistent with the EPA's interpretation of the Act at the time. The Government's *amicus curiae* brief in *Ouellette* stated that "the affected neighboring state [has] only an advisory role in the formulation of applicable effluent standards or limitations. The affected state may try to persuade the federal government or the source state to increase effluent requirements, but *ultimately possesses no statutory authority to compel that result, even when its waters are adversely affected by out-of-state pollution.* See 33 U. S. C. § 1341(a)(2), 1342(b)(3) and (5) . . . ." Brief for United States as *Amicus Curiae*, O. T. 1986, No. 85-1233, p. 19 (emphasis added; footnote omitted).

[*101] Unlike the foregoing cases, this litigation involves not a state-issued permit, but a federally issued permit. To explain the significance of this distinction, we comment further on the statutory scheme before addressing the specific issues raised by the parties.

III

[***LEdHR2] [2]The Clean Water Act anticipates a partnership between the States and the Federal Government, animated by a shared objective: "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U. S. C. § 1251(a). Toward this end, the Act provides for two sets of water quality measures. "Effluent limitations" are promulgated by the EPA and restrict the quantities, rates, and concentrations of specified substances which are discharged from point sources. See §§ 1311, 1314. "Water quality standards" are, in general, promulgated by the States and establish the desired condition of a waterway. [***252] See § 1313. These standards supplement effluent limitations "so that numerous point sources, despite individual compliance with effluent limitations, may be further regulated to prevent water quality from falling below acceptable levels." *EPA v. California ex rel. State Water Resources Control Bd.*, 426 U.S. 200, 205, n. 12, 48 L. Ed. 2d 578, 96 S. Ct. 2022 (1976).

The EPA provides States with substantial guidance in the drafting of water quality standards. See generally 40 CFR pt. 131 (1991) (setting forth model water quality standards). Moreover, § 303 of the Act requires, *inter alia*, that state authorities periodically review water quality standards and secure the EPA's approval of any revisions in the standards. [HN4]If the EPA recommends changes to the standards and the State fails to comply with that recommendation, the Act authorizes the EPA to promulgate water quality standards for the State. 33 U. S. C. § 1313(c).

The primary means for enforcing these limitations and standards is the NPDES, enacted in 1972 as a critical part of Congress' "complete rewriting" of federal water pollution [*102] law. *Milwaukee II*, 451 U.S. at 317. Section 301(a) of the Act, 33 U. S. C. § 1311(a), generally prohibits the discharge of any effluent into a navigable body of water unless the point source has obtained an NPDES permit. Section 402 establishes the NPDES permitting regime, and describes two types of permitting systems: state permit programs that must satisfy federal requirements and be approved by the EPA, and a federal program administered by the EPA.

[HN5]Section 402(b) authorizes each State to establish "its own permit program for discharges into navigable waters within its jurisdiction." 33 U. S. C. § 1342(b). Among the requirements the state program must satisfy [**1055] are the procedural protections for downstream States discussed in *Ouellette* and *Milwaukee II*. See §§ 1342(b)(3), (5). [7] Although these provisions do not authorize the downstream State to veto the issuance of a permit for a new point source in another State, the Administrator retains authority to block the issuance of any state-issued permit that is " [***253] outside the guidelines and requirements" of the Act. § 1342(d)(2). [8]

7 [HN6]Section 402(b) requires state permit programs

"(3) to insure that . . . any other State the waters of which may be affected . . . receive notice of each application for a permit and to provide an opportunity for public hearing before a ruling on each such application;

. . . .

"(5) to insure that any State (other than the permitting State), whose waters may be affected by the issuance of a permit may submit written recommendations to the permitting State (and the Administrator) with respect to any permit application and, if any part of such written recommendations are not accepted by the permitting State, that the permitting State will notify such affected State (and the Administrator) in writing of its failure to so accept such recommendations together with its reasons for so doing." 33 U. S. C. § 1342(b).

Although § 402(b) focuses on state-issued permits, § 402(a)(3) requires that, in issuing an NPDES permit, the Administrator follow the same procedures required of state permit programs. See 33 U. S. C. § 1342(a)(3); see also § 1341(a)(2).

8 [HN7]Section 402(d)(2) provides:

"(2) No permit shall issue (A) if the Administrator within ninety days of the date of his notification under subsection (b)(5) of this section objects in writing to the issuance of such permit, or (B) if the Administrator within ninety days of the date of transmittal of the proposed permit by the State objects in writing to the issuance of such permit as being outside the guidelines and requirements of this chapter. Whenever the Administrator objects to the issuance of a permit under this paragraph such written objection shall contain a statement of the reasons for such objection and the effluent limitations and conditions which such permit would include if it were issued by the Administrator." 33 U. S. C. § 1342(d)(2).

[*103] [HN8]In the absence of an approved state program, the EPA may issue an NPDES permit under § 402(a) of the Act. (In these cases, for example, because Arkansas had not been authorized to issue NPDES permits when the Fayetteville plant was completed, the permit was issued by the EPA itself.) The EPA's permit program is subject to the "same terms, conditions, and requirements" as a state permit program. 33 U. S. C. § 1342(a)(3). Notwithstanding this general symmetry, the EPA has construed the Act as requiring that EPA-issued NPDES permits also comply with § 401(a). That section, which predates § 402 and the NPDES, applies to a broad category of federal licenses, and sets forth requirements for "any applicant for a Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters." 33 U. S. C. § 1341(a). Section 401(a)(2) appears to prohibit the issuance of any federal license or permit over the objection of an affected State unless compliance with the affected State's water quality requirements can be ensured. [9]

9 [HN9]Section 401(a)(2) provides, in relevant part:

"Whenever such a discharge may affect, as determined by the Administrator, the quality of the waters of any other State, the Administrator . . . shall so notify such other State, the licensing or permitting agency, and the applicant. If, within sixty days after receipt of such notification, such other State determines that such discharge will affect the quality of its waters so as to violate any water quality requirements in such State, and within such sixty-day period notifies the Administrator and the licensing or permitting agency in writing of its objection to the issuance of such license or permit and requests a public hearing on such objection, the licensing or permitting agency shall hold such a hearing. The Administrator shall at such hearing submit his evaluation and recommendations with respect to any such objection to the licensing or permitting agency. Such agency, based upon the recommendations of such State, the Administrator, and upon any additional evidence, if any, presented to the agency at the hearing, shall condition such license or permit in such manner as may be necessary to insure compliance with applicable water quality requirements. If the imposition of conditions cannot insure such compliance such agency shall not issue such license or permit." 33 U. S. C. § 1341(a)(2).

[*104] [**1056] IV

The parties have argued three analytically distinct questions concerning the interpretation of the Clean Water Act. First, does the Act require the EPA, in crafting and issuing a permit to a point source in one State, to apply the water quality standards of downstream States? Second, even if the Act does not *require* as much, does the Agency have the statutory authority to mandate such compliance? Third, does the Act provide, as the Court of Appeals held, that once a body of [***254] water fails to meet water quality standards no discharge that yields effluent that reach the degraded waters will be permitted?

[***LEdHR3A] [3A]In these cases, it is neither necessary nor prudent for us to resolve the first of these questions. In issuing the Fayetteville permit, the EPA assumed it was obligated by both the Act and its own regulations to ensure that the Fayetteville discharge would not violate Oklahoma's standards. See App. to Pet. for Cert. in No. 90-1262, pp. 116a-117a, and n. 14. As we discuss below, this assumption was permissible and reasonable and therefore there is no need for us to address whether the Act requires as much. Moreover, much of the analysis and argument in the briefs of the parties relies on statutory provisions that govern not only federal permits issued pursuant to §§ 401(a) and 402(a), but also state permits issued under § 402(b). It seems unwise to evaluate those arguments in a case such as these, which only involve a federal permit.

[*105] [***LEdHR3B] [3B] [***LEdHR4A] [4A]Our decision not to determine at this time the scope of the Agency's statutory *obligations* does not affect our

resolution of the second question, which concerns the Agency's statutory *authority*. Even if the Clean Water Act itself does not require the Fayetteville discharge to comply with Oklahoma's water quality standards, the statute clearly does not limit the EPA's authority to mandate such compliance.

[***LEdHR4B] [4B]Since 1973, [HN10]EPA regulations have provided that an NPDES permit shall not be issued "when the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected States." [10] 40 CFR § 122.4(d) (1991); see also 38 Fed. Reg. 13533 (1973); 40 CFR § 122.44(d) (1991). Those regulations -- relied upon by the EPA in the issuance of the Fayetteville permit -- constitute a reasonable exercise of the Agency's statutory authority.

10 This restriction applies whether the permit is issued by the EPA or by an approved state program. See 40 CFR § 123.25 (1991).

[***LEdHR5] [5]Congress has vested in the Administrator broad discretion to establish conditions for NPDES permits. [HN11]Section 402(a) (2) provides that for EPA-issued permits "the Administrator shall prescribe conditions . . . to assure compliance with the requirements of [§ 402(a)(1)] and *such other requirements as he deems appropriate.*" 33 U. S. C. § 1342(a)(2) (emphasis added). Similarly, Congress preserved for the Administrator broad authority to oversee state permit programs:

> [HN12]"No permit shall issue . . . if the Administrator . . . objects in writing to the issuance of such permit as being outside the guidelines and requirements of this chapter." § 1342(d)(2).

[***LEdHR4C] [4C]The regulations relied on by the EPA were a perfectly reasonable exercise of the Agency's statutory discretion. The application of state water quality standards in the interstate context is wholly consistent with the Act's broad purpose "to restore and maintain the chemical, physical, and [*106] biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). Moreover, as noted above, § 301(b)(1)(C) expressly identifies the achievement of state water quality standards as [***255] one of the Act's central objectives. The Agency's regulations conditioning NPDES permits are a well-tailored means of achieving this goal.

Notwithstanding this apparent reasonableness, Arkansas argues that our description [**1057] in *Ouellette* of the role of affected States in the permit process and our characterization of the affected States' position as "subordinate," see 479 U.S. at 490-491, indicates that the EPA's application of the Oklahoma standards was error. We disagree. Our statement in *Ouellette* concerned only an affected State's input into the permit process; that input is clearly limited by the plain language of § 402(b). Limits on an affected State's direct participation in permitting decisions, however, do not in any way constrain the *EPA's* authority to require a point source to comply with downstream water quality standards.

Arkansas also argues that regulations requiring compliance with downstream standards are at odds with the legislative history of the Act and with the statutory scheme established by the Act. Although we agree with Arkansas that the Act's legislative history indicates that Congress intended to grant the Administrator discretion in his oversight of the issuance of NPDES permits, [11] we find nothing in that history to indicate that Congress intended to preclude the EPA from establishing a general requirement that such permits be conditioned to ensure compliance with downstream water quality standards.

11 See, *e. g.*, 1 Legislative History of Water Pollution Control Act Amendments of 1972 (Committee Print compiled for the Senate Committee on Public Works by the Library of Congress), Ser. No. 93-1, pp. 322, 388-389, 814 (1973); see also 33 U. S. C. § 1342(d)(3).

Similarly, we agree with Arkansas that in the Clean Water Act Congress struck a careful balance among competing policies and interests, but do not find the EPA regulations concerning [*107] the application of downstream water quality standards at all incompatible with that balance. Congress, in crafting the Act, protected certain sovereign interests of the States; for example, § 510 allows States to adopt more demanding pollution-control standards than those established under the Act. Arkansas emphasizes that § 510 preserves such state authority only as it is applied to the waters of the regulating State. Even assuming Arkansas' construction of § 510 is correct, cf. *id.*, at 493, that section only concerns *state* authority and does not constrain the *EPA's* authority to promulgate reasonable regulations requiring point sources in one State to comply with water quality standards in downstream States.

For these reasons, we find the EPA's requirement that the Fayetteville discharge comply with Oklahoma's water quality standards to be a reasonable exercise of the Agency's substantial statutory discretion. Cf. *Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837, 842-845, 81 L. Ed. 2d 694, 104 S. Ct. 2778 (1984).

V

[***LEdHR1B] [1B]The Court of Appeals construed the Clean Water Act to prohibit any discharge of effluent that would reach waters already in violation of existing water quality standards. [12] [***256] We find nothing in the Act to support this reading.

> 12 "We hold that the Clean Water Act prohibits granting an NPDES permit under the circumstances of this case (i. e., where applicable water quality standards have already been violated) and reverse EPA's decision to permit Fayetteville to discharge any part of its effluent to the Illinois River Basin." 908 F.2d 595, 616 (CA10 1990).
>
> "Congress cannot reasonably be presumed to have intended to exclude from the CWA's 'all-encompassing program,' 451 U.S. at 318, a permitting decision arising in circumstances such as those of this case. It is even more unfathomable that Congress fashioned a *'comprehensive . . .* policy for the *elimination* of water pollution,' *id.*, which sanctions continued pollution once minimum water quality standards have been transgressed. More likely, Congress simply never contemplated that EPA or a state would consider it permissible to authorize further pollution under such circumstances. We will not ascribe to the Act either the gaping loophole or the irrational purpose necessary to uphold EPA's action in this case." *Id.*, at 632 (footnotes omitted).

[*108] [**1058] The interpretation of the statute adopted by the court had not been advanced by any party during the Agency or court proceedings. Moreover, the Court of Appeals candidly acknowledged that its theory "has apparently never before been addressed by a federal court." 908 F.2d at 620, n. 39. The only statutory provision the court cited to support its legal analysis was § 402(h), see *id.*, at 633, which merely authorizes the EPA (or a state permit program) to prohibit a publicly owned treatment plant that is violating a condition of its NPDES permit from accepting any additional pollutants for treatment until the ongoing violation has been corrected. See 33 U. S. C. § 1342(h).

[***LEdHR1C] [1C] [***LEdHR6] [6]Although the Act contains several provisions directing compliance with state water quality standards, see, *e. g.*, § 1311(b)(1)(C), the parties have pointed to nothing that mandates a complete ban on discharges into a waterway that is in violation of those standards. The statute does, however, contain provisions designed to remedy existing water quality violations and to allocate the burden of reducing undesirable discharges between existing sources and new sources. See, *e. g.*, § 1313(d). Thus, rather than establishing the categorical ban announced by the Court of Appeals -- which might frustrate the construction of new plants that would improve existing conditions -- the Clean Water Act vests in the EPA and the States broad authority to develop long-range, areawide programs to alleviate and eliminate existing pollution. See, *e.g.*, § 1288(b)(2).

To the extent that the Court of Appeals relied on its interpretation of the Act to reverse the EPA's permitting decision, that reliance was misplaced.

[*109] VI

[***LEdHR7A] [7A] [***LEdHR8A] [8A] [***LEdHR9A] [9A]The Court of Appeals also concluded that the EPA's issuance of the Fayetteville permit was arbitrary and capricious because the Agency misinterpreted Oklahoma's water quality standards. The primary difference [13] between the court's [***257] and the Agency's interpretation of the standards derives from the court's construction of the Act. Contrary to the EPA's interpretation of the Oklahoma standards, the Court of Appeals read those standards as containing the same categorical ban on new discharges that the court had found in the Clean Water Act itself. Although we do not believe the text of the Oklahoma standards supports the court's reading (indeed, we note that Oklahoma itself had not advanced that interpretation in its briefs in the Court of Appeals), we reject it for a more fundamental reason -- namely, that the Court of Appeals exceeded the legitimate scope of judicial review of an agency adjudication. To emphasize the importance of this point, we shall first briefly assess the soundness of the EPA's interpretation and application of the Oklahoma [*110] standards and then comment more specifically on the Court of Appeals' approach.

[***LEdHR7B] [7B]

> 13 The court identified three errors in the EPA's reading of the Oklahoma standards. First, the court correctly observed that the ALJ and the Chief Judicial Officer misinterpreted § 4.10(c) of the standards as governing only the discharge of phosphorus into lakes, rather than the discharge of phosphorus into lakes and into all "perennial and intermittent streams." *Id.*, at 617 (emphasis omitted). This error was harmless because the ALJ found that the discharge into Lake Francis would comply with § 4.10(c) and it is undisputed that that discharge produced a greater threat to the slow-moving water of the lake than to the rapid flow in the river.
>
> [***LEdHR8B] [8B]
>
> The second flaw identified by the court was the ALJ's mistaken reliance on the 1985, rather than the 1982 version, of the Oklahoma stan-

dards. We agree with the Chief Judicial Officer, who also noted this error, that the portions of the two versions relevant to this case "do not differ materially." App. to Pet. for Cert. in No. 90-1262, p. 150a. Therefore, this error was also harmless.

Because these two errors were harmless, we have focused in the text on the major difference between the court's and the EPA's readings of the Oklahoma standards: the "no degradation" provision.

[***LEdHR10] [10]As discussed above, an EPA regulation requires an NPDES permit to comply "with the applicable water quality requirements of [**1059] all affected States." 40 CFR § 122.4(d) (1991). This regulation effectively incorporates into federal law those state-law standards the Agency reasonably determines to be "applicable." In such a situation, then, state water quality standards -- promulgated by the States with substantial guidance from the EPA [14] and approved by the Agency -- are part of the federal law of water pollution control.

14 See *supra*, at 101. Oklahoma's water quality standards closely track the EPA's model standards in effect at that time. Compare § 3 of the Oklahoma standards with 40 CFR § 35.1550(e)(1) (1981).

Two features of the body of law governing water pollution support this conclusion. First, as discussed more thoroughly above, we have long recognized that interstate water pollution is controlled by *federal* law. See *supra*, at 98-100. Recognizing that the system of federally approved state standards as applied in the interstate context constitutes federal law is wholly consistent with this principle. Second, treating state standards in interstate controversies as federal law accords with the Act's purpose of authorizing the EPA to create and manage a uniform system of interstate water pollution regulation.

[***LEdHR1D] [1D]Because we recognize that, at least insofar as they affect the issuance of a permit in another State, the Oklahoma standards have a federal character, the EPA's reasonable, consistently held interpretation of those standards is entitled to substantial deference. Cf. *INS v. National Center for Immigrants' Rights*, 502 U.S. 183, 189-190, 116 L. Ed. 2d 546, 112 S. Ct. 551 (1991); *Chevron U. S. A. Inc. v. Natural Resources Defense* [***258] *Council, Inc.*, 467 U.S. 837, 81 L. Ed. 2d 694, 104 S. Ct. 2778 (1984). In these cases, the Chief Judicial Officer ruled that the Oklahoma standards -- which require that there be "no degradation" of the upper Illinois River -- would [*111] only be violated if the discharge effected an "actually detectable or measurable" change in water quality. App. to Pet. for Cert. in No. 90-1262, p. 117a.

This interpretation of the Oklahoma standards is certainly reasonable and consistent with the purposes and principles of the Clean Water Act. As the Chief Judicial Officer noted, "unless there is some method for measuring compliance, there is no way to ensure compliance." *Id.*, at 118a, n. 16 (internal quotation marks omitted; citation omitted). Moreover, this interpretation of the Oklahoma standards makes eminent sense in the interstate context: If every discharge that had some theoretical impact on a downstream State were interpreted as "degrading" the downstream waters, downstream States might wield an effective veto over upstream discharges.

The EPA's application of those standards in these cases was also sound. On remand, the ALJ scrutinized the record and made explicit factual findings regarding four primary measures of water quality under the Oklahoma standards: eutrophication, [15] esthetics, [16] dissolved oxygen, [17] and [**1060] metals. [18] [*112] In each case, the ALJ found that the Fayetteville discharge would not lead to a detectable change in water quality. He therefore concluded that the Fayetteville discharge would not violate the Oklahoma water quality standards. Because we agree with the Agency's Chief Judicial Officer that these findings are supported by substantial evidence, we conclude that the Court of Appeals should have affirmed both the EPA's construction of the regulations and the issuance of the Fayetteville permit.

15 Eutrophication is the "normally slow aging process by which a lake evolves into a bog or marsh . . . . During eutrophication the lake becomes so rich in nutritive compounds (especially nitrogen and phosphorus) that algae and other microscopic plant life become superabundant, thereby 'choking' the lake . . . ." App. 57-58. With regard to eutrophication, the ALJ found that the Fayetteville plant would discharge 30 pounds of phosphorus per day, only about 6 pounds of which would reach the Arkansas/Oklahoma border, and that such a small amount would not result in an increase in eutrophication. App. to Pet. for Cert. in No. 90-1262, p. 129a.

16 With regard to esthetics, the ALJ concluded that the only discharged compound that would affect esthetics was phosphorus and that, again, the amount of that substance crossing the border would not affect the esthetic quality of Oklahoma's waters. *Id.*, at 135a-136a.

17 With regard to dissolved oxygen, the ALJ found that in the 39 miles between discharge and the border the effluent would experience "complete oxygen recovery" and therefore would not

affect the dissolved oxygen levels in the river. *Id.*, at 140a.

18 With regard to metals, the ALJ concluded that the concentrations of metals would be so low as not to violate the Oklahoma standards. *Id.*, at 143a.

[***LEdHR9B] [9B]In its review of the EPA's interpretation and application of the Oklahoma standards, the Court of Appeals committed three mutually compounding errors.

First, the court failed to give due regard to the EPA's interpretation of its own regulations, as those regulations incorporate the Oklahoma standards. Instead the court voiced its own interpretation of the governing law and concluded that "where a [***259] proposed source would discharge effluents that would contribute to conditions currently constituting a violation of applicable water quality standards, such [a] proposed source may not be permitted." 908 F.2d at 620. As we have already pointed out, that reading of the law is not supported by the statute or by any EPA regulation. The Court of Appeals sat in review of an agency action and should have afforded the EPA's interpretation of the governing law an appropriate level of deference. See generally *Chevron, supra*, at 842-844.

[***LEdHR9C] [9C] [***LEdHR11] [11]Second, the court disregarded well-established standards for reviewing the factual findings of agencies and instead made its own factual findings. The troubling nature of the court's analysis appears on the face of the opinion itself: At least four times, the court concluded that "there was substantial evidence before the ALJ to support" particular findings which the court thought appropriate, but which were [*113] contrary to those actually made by the ALJ. 908 F.2d at 620, 625, 627, 629. Although we have long recognized the "substantial evidence" standard in administrative law, the court below turned that analysis on its head. [HN13]A court reviewing an agency's adjudicative action should accept the *agency's* factual findings if those findings are supported by substantial evidence on the record as a whole. See generally *Universal Camera Corp. v. NLRB*, 340 U.S. 474, 95 L. Ed. 456, 71 S. Ct. 456 (1951). The court should not supplant the agency's findings merely by identifying alternative findings that could be supported by substantial evidence.

[***LEdHR9D] [9D]Third, the court incorrectly concluded that the EPA's decision was arbitrary and capricious. This error is derivative of the court's first two errors. Having substituted its reading of the governing law for the Agency's, and having made its own factual findings, the Court of Appeals concluded that the EPA erred in not considering an important and relevant fact -- namely, that the upper Illinois River was (by the court's assessment) already degraded.

[***LEdHR9E] [9E] [***LEdHR12] [12]As we have often recognized, [HN14]an agency ruling is "arbitrary and capricious if the agency has . . . entirely failed to consider an important aspect of the problem." *Motor Vehicle Mfrs. Assn. of United States, Inc. v. State Farm Mut. Automobile Ins. Co.*, 463 U.S. 29, 43, 77 L. Ed. 2d 443, 103 S. Ct. 2856 (1983).However, in these cases, the degraded status of the river is only an "important aspect" because of the Court of Appeals' novel and erroneous interpretation of the controlling law. Under the EPA's interpretation of that law, what matters is not the river's current status, but rather whether the proposed discharge will have a "detectable effect" on that status. If the Court of Appeals had been properly respectful of the Agency's permissible reading of the Act and [**1061] the Oklahoma standards, the court would not have adjudged the Agency's decision arbitrary and capricious for this reason.

[***LEdHR1E] [1E]In sum, the Court of Appeals made a policy choice that it was not authorized to make. Arguably, as that court suggested, [*114] it might be wise to prohibit any discharge into the Illinois River, even if that discharge would have no adverse impact on water quality. But it was surely not arbitrary for the EPA to conclude -- given the benefits to the river from the increased flow of relatively [***260] clean water [19] and the benefits achieved in Arkansas by allowing the new plant to operate as designed -- that allowing the discharge would be even wiser. It is not our role, or that of the Court of Appeals, to decide which policy choice is the better one, for it is clear that Congress has entrusted such decisions to the Environmental Protection Agency.

19 Justice Holmes recognized this potential benefit years ago:

> "There is no pretence that there is a nuisance of the simple kind that was known to the older common law. There is nothing which can be detected by the unassisted senses -- no visible increase of filth, no new smell. On the contrary, it is proved that the great volume of pure water from Lake Michigan which is mixed with the sewage at the start has improved the Illinois River in these respects to a noticeable extent. Formerly it was sluggish and ill smelling. Now it is a comparatively clear stream to which edible fish have returned. Its water is drunk by the fisherman, it is said, without evil results." *Missouri v. Illinois*, 200 U.S. 496, 522, 50 L. Ed. 572, 26 S. Ct. 268 (1906).

Accordingly, the judgment of the Court of Appeals is

Reversed.

REFERENCES

61A Am Jur 2d, Pollution Control 133-135, 144, 148, 153-158, 170-173, 179-181

11 Federal Procedure, L Ed, Environmental Protection 32:259, 32:294-32:404

9 Federal Procedural Forms, L Ed, Environmental Protection 29:71-29:94

20 Am Jur Pl & Pr Forms (Rev), Pollution Control, Forms 81-92

25 Am Jur Proof of Facts 233, Water Pollution--Sewage and Industrial Wastes

33 USCS 1342(a)(1)

L Ed Digest, Environmental Law 30

L Ed Index, Effluent Standards; Environmental Law; Pollution; Water Pollution

Index to Annotations, Environmental Law; Federal Water Pollution Control Act; Pollution; Water Pollution

Annotation References:

Supreme Court's views as to construction and application of Federal Water Pollution Control (Clean Water) Act (33 USCS 1251 -1376). 84 L Ed 2d 895.

Supreme Court's views as to weight and effect to be given, on subsequent judicial construction, to prior administrative construction of statute. 39 L Ed 2d 942.

Federal common law of nuisances as basis for relief in environmental pollution cases. 29 ALR Fed 137.

Right to maintain action to enjoin public nuisance as affected by existence of pollution control agency. 60 ALR3d 665.

Validity and construction of anti-water pollution statutes and ordinances. 32 ALR3d 215.

TAB "3"

LEXSEE

Caution
As of: Jun 17, 2010

DEFENDERS OF WILDLIFE and THE SIERRA CLUB, Petitioners, v. CAROL M. BROWNER, in her official capacity as Administrator of the United States Environmental Protection Agency, Respondent. CITY OF TEMPE, ARIZONA; CITY OF TUCSON, ARIZONA; CITY OF MESA, ARIZONA; PIMA COUNTY, ARIZONA; and CITY OF PHOENIX, ARIZONA, Intervenors-Respondents.

No. 98-71080

UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT

191 F.3d 1159; 1999 U.S. App. LEXIS 22212; 99 Cal. Daily Op. Service 7618; 99 Daily Journal DAR 9661; 30 ELR 20116

August 11, 1999, Argued and Submitted, San Francisco, California
September 15, 1999, Filed

SUBSEQUENT HISTORY: [**1] As Amended December 7, 1999.

PRIOR HISTORY: Petition to Review a Decision of the Environmental Protection Agency. EPA No. 97-3.

DISPOSITION: PETITION DENIED.

CASE SUMMARY:

PROCEDURAL POSTURE: Petitioners appealed decision of the Environmental Appeals Board denying reconsideration of the Environmental Protection Agency's decision issuing five municipalities National Pollution Discharge System permits, without requiring numeric limitations to ensure compliance with state water-quality standards.

OVERVIEW: The Environmental Protection Agency (EPA) issued permits to municipalities without requiring limitations on storm-sewer discharges. Petitioners alleged that the Water Quality Act (WQA), 33 U.S.C.S. § 1311(b)(1)(C), required municipalities to strictly comply with state water-quality standards. Court concluded that EPA's decision was not arbitrary or capricious. Court determined that WQA unambiguously expressed Congress' intent that municipal storm-sewer discharges did not have to strictly comply with WQA. Congress expressly put in provision for industrial storm-water discharges requiring compliance with WQA, but there was no similar provision in WQA for municipal storm-sewer discharges. The plain language of WQA thus exempted municipal storm-sewer discharges from strict compliance. Court found other provisions in WQA excluded certain discharges from permit altogether. Based on that fact, court concluded exemption of municipal storm-sewer discharges from strict compliance with WQA was not so unusual that the court should not interpret the statute as written.

OUTCOME: Court denied petition for reconsideration, because Environmental Protection Agency did not act arbitrarily or capriciously in issuing permits. In examining Water Quality Act, court determined that it was Congress' specific intent to exempt municipal storm-sewer discharges from strict compliance with the statute.

CORE TERMS: municipal, water quality, storm, water-quality, industrial, pollutant, administrator, storm-sewer, strict compliance, storm-water, environmental, quotation marks omitted, unambiguously, numeric, storm sewers, practicable, dischargers, effluent, entity, exempt, statutory construction, engineering, capricious, stringent, maximum, runoff, Clean Water Act, decision to issue, permit requirements, ensure compliance

LexisNexis(R) Headnotes

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > Public Participation
[HN1] 26 U.S.C.S. § 1342(a)(1) authorizes the Environmental Protection Agency to issue National Pollution Discharge Elimination System permits, thereby allowing entities to discharge some pollutants.

Administrative Law > Judicial Review > Reviewability > Standing
Civil Procedure > Justiciability > General Overview
Environmental Law > Litigation & Administrative Proceedings > Judicial Review
[HN2] 33 U.S.C.S. § 1369(b)(1)(F) authorizes any interested person to seek review in court of an Environmental Protection Agency decision issuing or denying any permit under 26 U.S.C.S. § 1342(a)(1). Any interested person means any person that satisfies the injury-in-fact requirement for U.S. Const. art. III standing.

Environmental Law > Litigation & Administrative Proceedings > Nuisances, Trespasses & Strict Liability
[HN3]A plaintiff claiming injury from environmental damage must use the area affected by the challenged activity.

Administrative Law > Judicial Review > Standards of Review > Abuse of Discretion
Administrative Law > Judicial Review > Standards of Review > Arbitrary & Capricious Review
Environmental Law > Litigation & Administrative Proceedings > Judicial Review
[HN4]The Administrative Procedures Act, 5 U.S.C.S. § 701, et seq., provides the standard of review for the Environmental Protection Agency's decision to issue a permit. Under the Administrative Procedures Act, the court generally reviews such a decision to determine whether it was arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.

Administrative Law > Agency Rulemaking > Rule Application & Interpretation > Validity
Administrative Law > Judicial Review > Standards of Review > General Overview
Governments > Legislation > Interpretation
[HN5]The court has established a two-step process for reviewing an agency's construction of a statute it administers. Under the first step, the court employs traditional tools of statutory construction to determine whether Congress has expressed its intent unambiguously on the question before the court. If the intent of Congress is clear, that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress. If, instead, Congress has left a gap for the administrative agency to fill, the court proceeds to step two. At step two, the court must uphold the administrative regulation unless it is arbitrary, capricious, or manifestly contrary to the statute.

Environmental Law > Water Quality > Clean Water Act > Coverage & Definitions > Discharges
Environmental Law > Water Quality > Clean Water Act > Discharge Permits > Effluent Limitations
[HN6]The Clean Water Act, 33 U.S.C.S. § 1251, et seq., generally prohibits the discharge of any pollutant from a point source into the navigable waters of the United States. An entity can, however, obtain a National Pollution Discharge Elimination System permit that allows for the discharge of some pollutants.

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > Effluent Limitations
Environmental Law > Water Quality > Clean Water Act > Water Quality Standards
[HN7]A National Pollution Discharge Elimination System permit imposes effluent limitations on discharges. First, a permit-holder shall achieve effluent limitations which shall require the application of the best practicable control technology currently available. Second, a permit-holder shall achieve any more stringent limitation, including those necessary to meet water quality standards, treatment standards or schedules of compliance, established pursuant to any state law or regulations.

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > Storm Water Discharges
[HN8]See 33 U.S.C.S. § 1342(p)(3).

Governments > Legislation > Interpretation
[HN9]Questions of congressional intent that can be answered with traditional tools of statutory construction are still firmly within the province of the courts. Using traditional tools of statutory construction, when interpreting a statute, the court looks first to the words that Congress used. Rather than focusing just on the word or phrase at issue, the court looks to the entire statute to determine congressional intent.

Governments > Legislation > Interpretation

[HN10]Where Congress includes particular language in one section of a statute but omits it in another section of the same Act, it is generally presumed that Congress acts intentionally and purposely in the disparate inclusion or exclusion.

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > Storm Water Discharges Governments > Legislation > Interpretation
[HN11]The court generally refuses to interpret a statute in a way that renders a provision superfluous.

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > Effluent Limitations
Environmental Law > Water Quality > Clean Water Act > Discharge Permits > Storm Water Discharges Governments > Local Governments > Licenses
[HN12]The Water Quality Act contains other provisions that undeniably exempt certain discharges from the permit requirement altogether, and therefore from 33 U.S.C.S. § 1311. For example, the Administrator shall not require a permit under this section for discharges composed entirely of return flows from irrigated agriculture. 33 U.S.C.S. § 1342(l)(1). Similarly, a permit is not required for certain storm-water runoff from oil, gas, and mining operations. See 33 U.S.C.S. § 1342(l)(2).

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > Storm Water Discharges
[HN13]Congress gave the administrator discretion to determine what controls are necessary. Under that discretionary provision, the Environmental Protection Agency (EPA) has the authority to determine that ensuring strict compliance with state water-quality standards is necessary to control pollutants. The EPA also has the authority to require less than strict compliance with state water-quality standards. The EPA has adopted an interim approach, which uses best management practices (BMPs) in first-round storm water permits to provide for the attainment of water quality standards.

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Craig Reece, Phoenix City Attorney's Office, Phoenix, Arizona; Stephen J. Burg, Mesa City Attorney's Office, Mesa, Arizona; Timothy Harrison, Tucson City Attorney's Office, Tucson, Arizona; and Harlan C. Agnew, Deputy County Attorney, Tucson, Arizona, for the intervenors-respondents.

David Burchmore, Squire, Sanders & Dempsey, Cleveland, Ohio, for the amici curiae.

JUDGES: Before: John T. Noonan, David R. Thompson, and Susan P. Graber, Circuit Judges. Opinion by Judge Graber.

OPINION BY: SUSAN P. GRABER

OPINION

[*1161] AMENDED OPINION

GRABER, Circuit Judge:

Petitioners challenge the Environmental Protection Agency's (EPA) decision to issue National Pollution Discharge Elimination System (NPDES) permits to five municipalities, for their separate storm sewers, without requiring numeric limitations [**2] to ensure compliance with state water-quality standards. Petitioners sought administrative review of the decision within the EPA, which the Environmental Appeals Board (EAB) denied. This timely petition for review ensued. For the reasons that follow, we deny the petition.

FACTUAL AND PROCEDURAL BACKGROUND

Title [HN1] 26 U.S.C. § 1342(a)(1) authorizes the EPA to issue NPDES permits, thereby allowing entities to discharge some pollutants. In 1992 and 1993, the cities of Tempe, Tucson, Mesa, and Phoenix, Arizona, and Pima County, Arizona (Intervenors), submitted applications for NPDES permits. The EPA prepared draft permits for public comment; those draft permits did not attempt to ensure compliance with Arizona's water-quality standards.

Petitioner Defenders of Wildlife objected to the permits, arguing that they must contain numeric limitations to ensure strict compliance with state water-quality standards. The State of Arizona also objected.

Thereafter, the EPA added new requirements:

> To ensure that the permittee's activities achieve timely compliance with applicable water quality standards (Arizona Administrative Code, Title 18, Chapter 11, Article 1), the [**3] permittee shall implement the [Storm Water Management Program], monitoring, reporting and other requirements of this permit in accordance with the time frames established in the

> [Storm Water Management Program] referenced in Part I.A.2, and elsewhere in the permit. This timely implementation of the requirements of this permit shall constitute a schedule of compliance authorized by Arizona Administrative Code, section R18-11-121(C).

The Storm Water Management Program included a number of structural environmental controls, such as storm-water detention basins, retention basins, and infiltration ponds. It also included programs to remove illegal discharges.

With the inclusion of those "best management practices," the EPA determined that the permits ensured compliance with state water-quality standards. The Arizona Department of Environmental Quality agreed:

> The Department has reviewed the referenced municipal NPDES storm-water permit pursuant to Section 401 of the Federal Clean Water Act to ensure compliance with State water quality standards. We have determined that, based on the information provided in the permit, and the fact sheet, adherence to provisions and [**4] requirements set forth in the final municipal permit, will protect the water quality of the receiving water.

On February 14, 1997, the EPA issued final NPDES permits to Intervenors. Within 30 days of that decision, Petitioners requested an evidentiary hearing with the regional administrator. *See* 40 C.F.R. § 124.74. Although Petitioners requested a hearing, they conceded that they raised only a legal issue and that a hearing was, in fact, unnecessary. Specifically, Petitioners raised only the legal question whether the Clean Water Act (CWA) requires numeric limitations to ensure strict compliance with state water-quality standards; they did not raise the factual question whether the management practices that the EPA chose would be effective.

[*1162] On June 16, 1997, the regional administrator summarily denied Petitioners' request. Petitioners then filed a petition for review with the EAB. *See* 40 C.F.R. § 124.91(a). On May 21, 1998, the EAB denied the petition, holding that the permits need not contain numeric limitations to ensure strict compliance with state water-quality standards. Petitioners then moved for reconsideration, *see* 40 C.F.R. § 124.91(i), which the EAB denied.

[**5] JURISDICTION

[HN2]Title 33 U.S.C. § 1369(b)(1)(F) authorizes "any interested person" to seek review in this court of an EPA decision "issuing or denying any permit under section 1342 of this title." "Any interested person" means any person that satisfies the injury-in-fact requirement for Article III standing. *See Natural Resources Defense Council, Inc. v. EPA*, 966 F.2d 1292, 1297 (9th Cir. 1992) [*NRDC II*]. It is undisputed that Petitioners satisfy that requirement. Petitioners allege that "members of Defenders and the Club use and enjoy ecosystems affected by storm water discharges and sources thereof governed by the above-referenced permits," and no other party disputes those facts. *See Lujan v. Defenders of Wildlife*, 504 U.S. 555, 565-66, 119 L. Ed. 2d 351, 112 S. Ct. 2130 (1992) [HN3]("[A] plaintiff claiming injury from environmental damage must use the area affected by the challenged activity."); *see also NRDC II*, 966 F.2d at 1297 ("NRDC claims, inter alia, that [the] EPA has delayed unlawfully promulgation of storm water regulations and that its regulations, as published, inadequately control storm water [**6] contaminants. NRDC's allegations . . . satisfy the broad standing requirement applicable here.").

Intervenors argue, however, that they were not parties when this action was filed and that this court cannot redress Petitioners' injury without them. Their real contention appears to be that they are indispensable parties under Federal Rule of Civil Procedure 19. We need not consider that contention, however, because in fact Intervenors have been permitted to intervene in this action and to present their position fully. In the circumstances, Intervenors have suffered no injury.

DISCUSSION

A. *Standard of Review*

[HN4]The Administrative Procedures Act (APA), 5 U.S.C. §§ 701-06, provides our standard of review for the EPA's decision to issue a permit. *See American Mining Congress v. EPA*, 965 F.2d 759, 763 (9th Cir. 1992). Under the APA, we generally review such a decision to determine whether it was "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A).

On questions of statutory interpretation, we follow the approach from *Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837, 81 L. Ed. 2d 694, 104 S. Ct. 2778 (1984). [**7] *See NRDC II*, 966 F.2d at 1297 (so holding). In *Chevron*, 467 U.S. at 842-44, the Supreme Court devised a two-step process for reviewing an administrative agency's interpretation of a statute that it administers. *See also Bicycle Trails Council of Marin v. Babbitt*, 82 F.3d 1445, 1452 (9th Cir.

1996) ("The [HN5]Supreme Court has established a two-step process for reviewing an agency's construction of a statute it administers."). Under the first step, we employ "traditional tools of statutory construction" to determine whether Congress has expressed its intent unambiguously on the question before the court. *Chevron*, 467 U.S. at 843 n.9. "If the intent of Congress is clear, that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress." *Id.* at 842-43 (footnote omitted). If, instead, Congress has left a gap for the administrative agency to fill, we proceed to step two. *See id.* at 843. At step two, we must uphold the administrative regulation unless it is "arbitrary, capricious, or manifestly contrary to the statute." *Id.* at 844.

[**8] [*1163] B. *Background*

[HN6]The CWA generally prohibits the "discharge of any pollutant," 33 U.S.C. § 1311(a), from a "point source" into the navigable waters of the United States. *See* 33 U.S.C. § 1362(12)(A). An entity can, however, obtain an NPDES permit that allows for the discharge of some pollutants. *See* 33 U.S.C. § 1342(a)(1).

[HN7]Ordinarily, an NPDES permit imposes effluent limitations on such discharges. *See* 33 U.S.C. § 1342(a)(1) (incorporating effluent limitations found in 33 U.S.C. § 1311). First, a permit-holder "shall . . . achieve . . . effluent limitations . . . which shall require the application of the best practicable control technology [BPT] currently available." 33 U.S.C. § 1311(b)(1)(A). Second, a permit-holder "*shall . . . achieve . . . any more stringent limitation*, including those *necessary to meet water quality standards*, treatment standards or schedules of compliance, established pursuant to any State law or regulations (under authority preserved by section 1370 of this title)." 33 U.S.C. § 1311 [**9] (b)(1)(C) (emphasis added). Thus, although the BPT requirement takes into account issues of practicability, *see Rybachek v. EPA*, 904 F.2d 1276, 1289 (9th Cir. 1990), the EPA also "is under a specific obligation to require that level of effluent control which is needed to implement existing water quality standards without regard to the limits of practicability," *Oklahoma v. EPA*, 908 F.2d 595, 613 (10th Cir. 1990) (internal quotation marks omitted), *rev'd on other grounds sub nom. Arkansas v. Oklahoma*, 503 U.S. 91, 117 L. Ed. 2d 239, 112 S. Ct. 1046 (1992). *See also Ackels v. EPA*, 7 F.3d 862, 865-66 (9th Cir. 1993) (similar).

The EPA's treatment of storm-water discharges has been the subject of much debate. Initially, the EPA determined that such discharges generally were exempt from the requirements of the CWA (at least when they were uncontaminated by any industrial or commercial activity). *See* 40 C.F.R. § 125.4 (1975).

The Court of Appeals for the District of Columbia, however, invalidated that regulation, holding that "the EPA Administrator does not have authority to exempt categories of point sources from [**10] the permit requirements of § 402 [33 U.S.C. § 1342]." *Natural Resources Defense Council, Inc. v. Costle*, 186 U.S. App. D.C. 147, 568 F.2d 1369, 1377 (D.C. Cir. 1977). "Following this decision, [the] EPA issued proposed and final rules covering storm water discharges in 1980, 1982, 1984, 1985 and 1988. These rules were challenged at the administrative level and in the courts." *American Mining Congress*, 965 F.2d at 763.

Ultimately, in 1987, Congress enacted the Water Quality Act amendments to the CWA. *See NRDC II*, 966 F.2d at 1296 ("Recognizing both the environmental threat posed by storm water runoff and [the] EPA's problems in implementing regulations, Congress passed the Water Quality Act of 1987 containing amendments to the CWA.") (footnotes omitted). Under the Water Quality Act, from 1987 until 1994, [1] most entities discharging storm water did not need to obtain a permit. *See* 33 U.S.C. § 1342(p).

1 As enacted, the Water Quality Act extended the exemption to October 1, 1992. Congress later amended the Act to change that date to October 1, 1994. *See* Pub. L. No. 102-580.

[**11] Although the Water Quality Act generally did not require entities discharging storm water to obtain a permit, it did require such a permit for discharges "with respect to which a permit has been issued under this section before February 4, 1987," 33 U.S.C. § 1342(p)(2)(A); discharges "associated with industrial activity," 33 U.S.C. § 1342(p)(2)(B); discharges from a "municipal separate sewer system serving a population of [100,000] or more," 33 U.S.C. § 1342(p)(2)(C) & (D); and "[a] discharge for which the Administrator . . . determines that the stormwater discharge contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States," 33 U.S.C. § 1342(p)(2)(E).

[*1164] When a permit is required for the discharge of storm water, the Water Quality Act sets two different standards:

> (A) Industrial discharges
>
> Permits for discharges associated with industrial activity shall meet all applicable provisions of this section *and section 1311* of this title.
>
> (B) Municipal discharge

> Permits for discharges from municipal [**12] storm sewers -
>
> (i) may be issued on a system- or jurisdiction-wide basis;
>
> (ii) shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers; and
>
> (iii) *shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator . . . determines appropriate for the control of such pollutants.*

[HN8] 33 U.S.C. § 1342(p)(3) (emphasis added).

C. *Application of Chevron*

The EPA and Petitioners argue that the Water Quality Act is ambiguous regarding whether Congress intended for municipalities to comply strictly with state water-quality standards, under 33 U.S.C. § 1311(b)(1)(C). Accordingly, they argue that we must proceed to step two of *Chevron* and defer to the EPA's interpretation that the statute does require strict compliance. *See* Zimmerman v. Oregon Dep't of Justice, 170 F.3d 1169, 1173 (9th Cir. 1999) ("At step two, we must uphold the administrative regulation unless it is arbitrary, capricious, or [**13] manifestly contrary to the statute.") (citation and internal quotation marks omitted), *petition for cert. filed*, No. 99-243 (Aug. 10, 1999).

Intervenors and *amici*, on the other hand, argue that the Water Quality Act expresses Congress' intent unambiguously and, thus, that we must stop at step one of *Chevron*. *See, e.g.*, National Credit Union Admin. v. First Nat'l Bank & Trust Co., 522 U.S. 479, 118 S. Ct. 927, 938-39, 140 L. Ed. 2d 1 (1998) ("Because we conclude that Congress has made it clear that the *same* common bond of occupation must unite each member of an occupationally defined federal credit union, we hold that the NCUA's contrary interpretation is impermissible under the first step of *Chevron*.") (emphasis in original); Sierra Club v. EPA, 118 F.3d 1324, 1327 (9th Cir. 1997) ("Congress has spoken clearly on the subject and the regulation violates the provisions of the statute. Our inquiry ends at the first prong of *Chevron*."). We agree with Intervenors and *amici*: For the reasons discussed below, the Water Quality Act unambiguously demonstrates that Congress did not require municipal storm-sewer discharges to comply [**14] strictly with 33 U.S.C. § 1311(b)(1)(C). That being so, we end our inquiry at the first step of the *Chevron* analysis.

"Questions [HN9]of congressional intent that can be answered with 'traditional tools of statutory construction' are still firmly within the province of the courts" under *Chevron*. *NRDC II*, 966 F.2d at 1297 (citation omitted). "Using our 'traditional tools of statutory construction,' *Chevron*, 467 U.S. at 843 n.9, 104 S. Ct. 2778, when interpreting a statute, we look first to the words that Congress used." *Zimmerman*, 170 F.3d at 1173 (alterations, citations, and internal quotation marks omitted). "Rather than focusing just on the word or phrase at issue, we look to the entire statute to determine Congressional intent." *Id.* (alterations, citations, and internal quotation marks omitted).

As is apparent, Congress expressly required *industrial* storm-water discharges to comply with the requirements of 33 U.S.C. § 1311. *See* 33 U.S.C. § 1342(p)(3)(A) ("Permits for discharges associated with industrial activity *shall meet all applicable* [**15] *provisions of* this section and *section 1311* of this title.") (emphasis added). By incorporation, then, industrial [*1165] storm-water discharges "*shall . . . achieve . . . any more stringent limitation*, including those necessary to meet water quality standards, treatment standards or schedules of compliance, established pursuant to any State law or regulation (under authority preserved by section 1370 of this title)." 33 U.S.C. § 1311(b)(1)(C) (emphasis added); *see also* Sally A. Longroy, *The Regulation of Storm Water Runoff and its Impact on Aviation*, 58 J. Air. L. & Com. 555, 565-66 (1993) ("Congress further *singled out* industrial storm water dischargers, all of which are on the high-priority schedule, and requires them to satisfy all provisions of section 301 of the CWA [33 U.S.C. § 1311]. . . . Section 301 further mandates that NPDES permits include requirements that receiving waters meet water quality based standards.") (emphasis added). In other words, industrial discharges must comply strictly with state water-quality standards.

Congress chose not to include a similar provision for municipal [**16] storm-sewer discharges. Instead, Congress required municipal storm-sewer discharges "to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator . . . determines appropriate for the control of such pollutants." 33 U.S.C. § 1342(p)(3)(B)(iii).

The EPA and Petitioners argue that the difference in wording between the two provisions demonstrates ambiguity. That argument ignores precedent respecting the reading of statutes. Ordinarily, "where [HN10]Congress includes particular language in one section of a statute

but omits it in another section of the same Act, it is generally presumed that Congress acts intentionally and purposely in the disparate inclusion or exclusion." *Russello v. United States*, 464 U.S. 16, 23, 78 L. Ed. 2d 17, 104 S. Ct. 296 (1983) (citation and internal quotation marks omitted); *see also United States v. Hanousek*, 176 F.3d 1116, 1121 (9th Cir. 1999) (stating the same principle), *petition for cert. filed*, No. 98-323 (Aug. 23, 1999). Applying that familiar [**17] and logical principle, we conclude that Congress' choice to require industrial storm-water discharges to comply with 33 U.S.C. § 1311, but not to include the same requirement for municipal discharges, must be given effect. When we read the two related sections together, we conclude that 33 U.S.C. § 1342(p)(3)(B)(iii) does not require municipal storm-sewer discharges to comply strictly with 33 U.S.C. § 1311(b)(1)(C).

Application of that principle is significantly strengthened here, because 33 U.S.C. § 1342(p)(3)(B) *is not merely silent* regarding whether municipal discharges must comply with 33 U.S.C. § 1311. Instead, § 1342(p)(3)(B)(iii) *replaces* the requirements of § 1311 with the requirement that municipal storm-sewer dischargers "reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator . . . determines appropriate for the control of such pollutants." 33 U.S.C. § 1342(p)(3)(B)(iii). [**18] In the circumstances, the statute unambiguously demonstrates that Congress did not require municipal storm-sewer discharges to comply strictly with 33 U.S.C. § 1311(b)(1)(C).

Indeed, the EPA's and Petitioners' interpretation of 33 U.S.C. § 1342(p)(3)(B)(iii) would render that provision superfluous, a result that we prefer to avoid so as to give effect to all provisions that Congress has enacted. *See Government of Guam ex rel. Guam Econ. Dev. Auth. v. United States*, 179 F.3d 630, 634 (9th Cir. 1999) ("This [HN11]court generally refuses to interpret a statute in a way that renders a provision superfluous."), *as amended*, 1999 U.S. App. LEXIS 18691, 1999 WL 604218 (9th Cir. Aug. 12, 1999). Section 1342(p)(3)(B)(iii) creates a lesser standard than § 1311. Thus, if § 1311 continues to apply to municipal storm-sewer discharges, [*1166] the more stringent requirements of that section always would control.

Contextual clues support the plain meaning of § 1342(p)(3)(B)(iii), which we have described above. [HN12]The Water Quality Act contains other provisions that undeniably exempt certain discharges from the permit requirement altogether (and therefore from [**19] § 1311). For example, "the Administrator shall not require a permit under this section for discharges composed entirely of return flows from irrigated agriculture." 33 U.S.C. § 1342(l)(1). Similarly, a permit is not required for certain storm-water runoff from oil, gas, and mining operations. *See* 33 U.S.C. § 1342(l)(2). Read in the light of those provisions, Congress' choice to exempt municipal storm-sewer discharges from strict compliance with § 1311 is not so unusual that we should hesitate to give effect to the statutory text, as written.

Finally, our interpretation of § 1342(p)(3)(B)(iii) is supported by this court's decision in *NRDC II*. There, the petitioner had argued that "the EPA has failed to establish substantive controls for municipal storm water discharges as required by the 1987 amendments." *NRDC II*, 966 F.2d at 1308. This court disagreed with the petitioner's interpretation of the amendments:

> Prior to 1987, municipal storm water dischargers were subject to the same substantive control requirements as industrial and other types of storm water. In the 1987 amendments, *Congress retained the* [**20] *existing, stricter controls for industrial storm water dischargers but prescribed new controls for municipal storm water discharge.*

Id. (emphasis added). The court concluded that, under 33 U.S.C. § 1342(p)(3)(B)(iii), "*Congress did not mandate a minimum standards approach.*" *Id.* (emphasis added). The question in *NRDC II* was not whether § 1342(p)(3)(B)(iii) required strict compliance with state water-quality standards, *see* 33 U.S.C. § 1311(b)(1)(C). Nonetheless, the court's holding applies equally in this action and further supports our reading of 33 U.S.C. § 1342(p).

In conclusion, the text of 33 U.S.C. § 1342(p)(3)(B), the structure of the Water Quality Act as a whole, and this court's precedent all demonstrate that Congress did not require municipal storm-sewer discharges to comply strictly with 33 U.S.C. § 1311(b)(1)(C).

D. *Required Compliance with 33 U.S.C. § 1311(b)(1)(C)*

We are left with Intervenors' contention that the EPA may not, under the CWA, require strict compliance with state water-quality [**21] standards, through numerical limits or otherwise. We disagree.

Although Congress did not require municipal storm-sewer discharges to comply strictly with § 1311(b)(1)(C), § 1342(p)(3)(B)(iii) states that "permits for discharges from municipal storm sewers . . . shall require . . . *such other provisions as the Administrator . . . determines appropriate for the control of such pollu-*

tants." (Emphasis added.) That provision gives the EPA discretion to determine what pollution controls are appropriate. As this court stated in *NRDC II*, "Congress [HN13]gave the administrator discretion to determine what controls are necessary. . . . NRDC's argument that the EPA rule is inadequate cannot prevail in the face of the clear statutory language." 966 F.2d at 1308.

Under that discretionary provision, the EPA has the authority to determine that ensuring strict compliance with state water-quality standards is necessary to control pollutants. The EPA also has the authority to require less than strict compliance with state water-quality standards. The EPA has adopted an interim approach, which "uses best management practices (BMPs) in first-round storm water permits . . . to provide [**22] for the attainment of water quality standards." The EPA applied that approach to the permits at issue here. Under 33 U.S.C. § 1342(p)(3)(B)(iii), the EPA's choice to include [*1167] either management practices or numeric limitations in the permits was within its discretion. *See NRDC II*, 966 F.2d at 1308 ("Congress did not mandate a minimum standards approach or specify that [the] EPA develop minimal performance requirements."). In the circumstances, the EPA did not act arbitrarily or capriciously by issuing permits to Intervenors.

PETITION DENIED.

TAB "4"

LEXSEE


Caution
As of: Jun 17, 2010

PUD NO. 1 OF JEFFERSON COUNTY AND CITY OF TACOMA, PETITIONERS v. WASHINGTON DEPARTMENT OF ECOLOGY, ET AL.

No. 92-1911

SUPREME COURT OF THE UNITED STATES

511 U.S. 700; 114 S. Ct. 1900; 128 L. Ed. 2d 716; 1994 U.S. LEXIS 4271; 62 U.S.L.W. 4408; 38 ERC (BNA) 1593; 94 Cal. Daily Op. Service 3843; 94 Daily Journal DAR 7236; 24 ELR 20945; 8 Fla. L. Weekly Fed. S 172

February 23, 1994, Argued
May 31, 1994, Decided

PRIOR HISTORY: ON WRIT OF CERTIORARI TO THE SUPREME COURT OF WASHINGTON.

DISPOSITION: 121 Wash. 2d 179, 849 P.2d 646, affirmed.

CASE SUMMARY:

PROCEDURAL POSTURE: Petitioners, a city and a local utility district, desired to build a hydroelectric project on the Dosewallips River in Washington State. Respondent state environmental agency conditioned a permit for the project on the maintenance of specific minimum stream flows to protect salmon and steelhead runs. The Supreme Court of Washington upheld the agency's decision. Petitioners sought certiorari.

OVERVIEW: Because a Federal Energy Regulatory Commission license was required and because the project might result in discharges into the Dosewallips River, petitioners were required to obtain state certification of the project pursuant to § 401 (33 U.S.C.S. § 1341) of the Federal Water Pollution Control Act, commonly known as the Clean Water Act (Act), 33 U.S.C.S. § 1251 et seq. The principal dispute was whether the minimum stream flow requirement that the state imposed on the hydroelectric project was a permissible condition of a § 401 certification under the Act. The Court concluded that it was, upholding the state supreme court's judgment. The Court held that a state may include minimum stream flow requirements in a § 401 certification insofar as necessary to enforce a designated use contained in a state water quality standard. In so doing, the Court rejected petitioners' assertion that the Act was only concerned with water quality and did not allow the regulation of water quantity. Indeed, there was recognition in the Act itself that reduced stream flow, or diminishment of water quantity, could constitute water pollution.

OUTCOME: The Court affirmed the judgment of the state supreme court.

CORE TERMS: water quality, certification, stream, license, designated, Clean Water Act, river, antidegradation, effluent, fish, state law, navigable waters, quantity, ensure compliance, environmental, hydroelectric, pollution, wildlife, recreation, deference, organisms, impose conditions, recommendation, interfere, licensing, unrelated, spawning, fishery, habitat, Federal Power Act FPA

LexisNexis(R) Headnotes

Environmental Law > Water Quality > Clean Water Act > Water Quality Standards
Real Property Law > Water Rights > Beneficial Use
Real Property Law > Water Rights > Nonconsumptive Uses > General Overview
[HN1]Pursuant to § 303 (33 U.S.C.S. § 1313) of the Federal Water Pollution Control Act, commonly known as the Clean Water Act (Act), 33 U.S.C.S. § 1251 et seq., a state water quality standard shall consist of the desig-

nated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses. 33 U.S.C.S. § 1313(c)(2)(A). In setting standards, the state must comply with the following broad requirements: such standards shall be such as to protect the public health or welfare, enhance the quality of water and serve the purposes of the Act. Such standards shall be established taking into consideration their use and value for public water supplies, propagation of fish and wildlife, recreational, and other purposes. Section 303 also contains an "antidegradation policy," a policy requiring that state standards be sufficient to maintain existing beneficial uses of navigable waters, preventing their further degradation.

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > State Water Quality Certifications
Environmental Law > Water Quality > Clean Water Act > Enforcement > General Overview
Environmental Law > Water Quality > Clean Water Act > Water Quality Standards
[HN2]States are responsible for enforcing water quality standards on intrastate waters. 33 U.S.C.S. § 1319(a). In addition to these primary enforcement responsibilities, § 401 of the Federal Water Pollution Control Act, 33 U.S.C.S. § 1341, requires states to provide a water quality certification before a federal license or permit can be issued for activities that may result in any discharge into intrastate navigable waters. Specifically, § 401 requires an applicant for a federal license or permit to conduct any activity which may result in any discharge into the navigable waters to obtain from the state a certification that any such discharge will comply with the applicable provisions of 33 U.S.C.S. §§ 1311, 1312, 1313, 1316, and 1317. 33 U.S.C.S. § 1341(a). Section 401(d) further provides that any certification shall set forth any effluent limitations and other limitations, and monitoring requirements necessary to assure that any applicant will comply with any applicable effluent limitations and other limitations, under 33 U.S.C.S. § 1311 or 1312, and with any other appropriate requirement of State law set forth in such certification. 33 U.S.C. § 1341(d). The limitations included in the certification become a condition on any federal license.

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > State Water Quality Certifications
[HN3]See 33 U.S.C.S. § 1341.

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > State Water Quality Certifications
Environmental Law > Water Quality > Clean Water Act > Water Quality Standards
Environmental Law > Water Quality > Clean Water Act > Wetlands
[HN4]State water quality standards adopted pursuant to § 303 (33 U.S.C.S. § 1313) of the Federal Water Pollution Control Act, commonly known as the Clean Water Act (Act), 33 U.S.C.S. § 1251 et seq., are among the "other limitations" with which a state may ensure compliance through the certification process under § 401 (33 U.S.C.S. § 1341) of the Act.

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > State Water Quality Certifications
Environmental Law > Water Quality > Clean Water Act > Water Quality Standards
[HN5]Pursuant to § 401 (33 U.S.C.S. § 1341) of the Federal Water Pollution Control Act, commonly known as the Clean Water Act, 33 U.S.C.S. § 1251 et seq., states may condition certification upon any limitations necessary to ensure compliance with state water quality standards or any other appropriate requirement of state law.

Environmental Law > Water Quality > Clean Water Act > Coverage & Definitions > Navigable Waters
Environmental Law > Water Quality > Clean Water Act > Discharge Permits > State Water Quality Certifications
Environmental Law > Water Quality > Clean Water Act > Water Quality Standards
[HN6]Pursuant to § 401(d) (33 U.S.C.S. § 1341(d)) of the Federal Water Pollution Control Act, commonly known as the Clean Water Act (Act), 33 U.S.C.S. § 1251 et seq., a state may require that a permit applicant comply with both the designated uses and the water quality criteria of the state standards. In granting certification pursuant to § 401(d), the state shall set forth any limitations necessary to assure that the applicant will comply with any limitations under § 303 (33 U.S.C.S. § 1313) of the Act and with any other appropriate requirement of state law. A certification requirement that an applicant operate the project consistently with state water quality standards, consistently with the designated uses of the water body and the water quality criteria, is both a "limitation" to assure compliance with limitations imposed under § 303, and an "appropriate" requirement of state law.

Environmental Law > Water Quality > Clean Water Act > Coverage & Definitions > General Overview
Real Property Law > Water Rights > Nonconsumptive Uses > Fishing
[HN7]Under the Federal Water Pollution Control Act, commonly known as the Clean Water Act (Act), 33 U.S.C.S. § 1251 et seq., reduced stream flow, specifically diminishment of water quantity, can constitute water pollution. In particular, the Act's definition of pollution as the man-made or man induced alteration of the chemical, physical, biological, and radiological integrity of water encompasses the effects of reduced water quantity. 33 U.S.C.S. § 1362(19).

Energy & Utilities Law > Electric Power Industry > Federal Power Act > General Overview
Environmental Law > Water Quality > Clean Water Act > Discharge Permits > State Water Quality Certifications
Real Property Law > Water Rights > Administrative Allocations
[HN8]Sections 101(g) and 510(2) (33 U.S.C.S. §§ 1251(g) and 1370(2)) of the Federal Water Pollution Control Act, commonly known as the Clean Water Act, 33 U.S.C.S. § 1251 et seq., preserve the authority of each state to allocate water quantity as between users; they do not limit the scope of water pollution controls that may be imposed on users who have obtained, pursuant to state law, a water allocation.

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > State Water Quality Certifications
Environmental Law > Water Quality > Clean Water Act > Enforcement > General Overview
Environmental Law > Water Quality > Clean Water Act > Water Quality Standards
[HN9]A state may include minimum stream flow requirements in a certification issued pursuant to § 401 (33 U.S.C.S. § 1341) of the Federal Water Pollution Control Act, commonly known as the Clean Water Act, 33 U.S.C.S. § 1251 et seq., insofar as necessary to enforce a designated use contained in a state water quality standard.

DECISION:

State's minimum stream flow requirement held to be permissible condition of certification under 33 USCS 1341 to build hydroelectric project.

SUMMARY:

The Clean Water Act (33 USCS 1251 et seq.) requires (1) under 303 of the Act (33 USCS 1313), that each state, subject to federal approval, institute comprehensive water quality standards establishing water quality goals for all intrastate waters, (2) under 401 of the Act (33 USCS 1341), that states provide a water quality certification before a federal license or permit is issued for activities that might result in any discharge into intrastate navigable waters, and (3) under 401(d) of the Act (33 USCS 1341(d)), that any certification shall set forth any effluent limitations and other limitations necessary to assure that any applicant will comply with various provisions of the Act and appropriate state law requirements, which limitations will become a condition on any federal license. The state of Washington adopted comprehensive water quality standards intended to regulate all of the state's navigable waters under an administrative scheme that classified certain waters as extraordinary, which waters had characteristic uses including fish migration, rearing, and spawning. A city and a local utility district proposed to build on a river that had been classified as extraordinary a hydroelectric project that would divert water from a 1.2-mile bypass reach of the river, run the water through turbines to generate electricity, and then return the water to the river below the bypass reach. The state ecology department issued a 401 water quality certification imposing on the project conditions that included a minimum stream flow requirement of between 100 and 200 cubic feet per second, depending on the season. The state Pollution Control Hearings Board determined that the flow requirement, by being intended to enhance rather than maintain the fishery in the river, exceeded the ecology department's authority under state law, but the Thurston County Superior Court, holding that the Board had erred, reinstated the department's flow requirement. The Supreme Court of Washington, holding that the antidegradation provisions of the state water quality standards required the imposition of minimum stream flows, and that 401(d) authorized the flow requirement imposed by the ecology department, affirmed the Superior Court judgment (121 Wash 2d 179, 849 P2d 646).

On certiorari, the United States Supreme Court affirmed. In an opinion by O'Connor, J., joined by Rehnquist, Ch. J., and Blackmun, Stevens, Kennedy, Souter, and Ginsburg, JJ., it was held that the minimum flow requirement was a permissible condition of a 401 certification, because (1) pursuant to 401, states may condition certification upon any limitations necessary to insure compliance with state water quality standards or any other appropriate requirement of state law; (2) the minimum flow requirement was such a limitation; and (3) the court was unwilling to read implied limitations into 401 based on a purported conflict with the authority of the Federal Energy Regulatory Commission (FERC), under

the Federal Power Act (FPA) (16 USCS 791a et seq.), to license hydroelectric projects, since (a) 401's certification requirement applied to statutes and regulatory schemes other than those concerning FERC's authority under the FPA, and (b) any conflict with such authority was hypothetical, where FERC had not yet acted on the license application from the city and the local utility district.

Stevens, J., concurring, expressed the view that the Clean Water Act (1) did not purport to place any constraint on a state's power to regulate the quality of its own waters more stringently than federal law might require, and (2) explicitly recognized states' ability to impose stricter standards.

Thomas, J., joined by Scalia, J., dissenting, expressed the view that (1) the majority opinion fundamentally altered the federal-state balance Congress had carefully crafted in the Federal Power Act (16 USCS 791a et seq.), and (2) such a result was neither mandated nor supported by the text of 401.

LAWYERS' EDITION HEADNOTES:

[***LEdHN1]

ENERGY §30

ENVIRONMENTAL LAW §32

WATERS §20

hydroelectric power -- federal license -- state minimum flow requirement -- protection of fisheries --

Headnote:[1A][1B][1C][1D]

A minimum stream flow requirement of between 100 and 200 cubic feet per second imposed, in order to protect a river's fisheries, by a state environmental agency under a water quality certification issued, with respect to a proposed hydroelectric project on the river, pursuant to 401 of the Clean Water Act (33 USCS 1341)--which requires states to provide a water quality certification before a federal license or permit can be issued for activities that might result in any discharge into intrastate navigable waters--is a permissible condition of 401 certification, because the United States Supreme Court has determined that (1) pursuant to 401, states may condition certification upon any limitations necessary to insure compliance with state water quality standards or any other appropriate requirement of state law; (2) the minimum flow requirement is such a limitation; and (3) the court is unwilling to read implied limitations into 401 based on a purported conflict with the authority of the Federal Energy Regulatory Commission (FERC), under the Federal Power Act (FPA) (16 USCS 791a et seq.), to license hydroelectric projects, since (a) 401's certification requirement applies to other statutes and regulatory schemes in addition to that concerning FERC's authority under the FPA, and (b) any conflict with such authority is hypothetical, where FERC has not yet acted on the license application for the project in question. (Thomas and Scalia, JJ., dissented from this holding.)

[***LEdHN2]

ENVIRONMENTAL LAW §32

Clean Water Act -- federal license -- state water quality certification --

Headnote:[2A][2B]

Pursuant to 401 of the Clean Water Act (33 USCS 1341), which requires states to provide a water quality certification before a federal license or permit can be issued for activities that might result in any discharge into intrastate navigable waters, states may condition certification upon any limitations necessary to insure compliance with state water quality standards or any other appropriate requirement of state law, rather than on only water quality standards specifically tied to a discharge, because (1) the text of 401(d) of the Act (33 USCS 1341(d)), providing that any certification shall set forth any effluent limitations and other limitations necessary to assure that any applicant will comply with various provisions of the Act and appropriate state law requirements, refers to the compliance of the applicant, not the discharge, (2) the conclusion of the Environmental Protection Agency (EPA)--whose regulations implementing 401 expressly interpret 401 as requiring the state to find that there is a reasonable assurance that the activity will be conducted in a manner which will not violate applicable water quality standards--that activities, not merely discharges, must comply with state water quality standards is a reasonable interpretation of 401 and is entitled to deference, (3) consistent with the EPA's view of the Act, state water quality standards adopted pursuant to 303 of the Act (33 USCS 1313), which requires each state, subject to federal approval, to institute comprehensive standards establishing water quality goals for all intrastate waters, are among the "other limitations" with which a state may insure compliance through the 401 certification process, (4) limitations to assure compliance with state water quality standards are permitted by 401(d)'s reference to any other appropriate requirement of state law, and (5) at a minimum, limitations imposed pursuant to state water quality standards adopted pursuant to 303 are "appropriate" requirements of state law. (Thomas and Scalia, JJ., dissented from this holding.)

[***LEdHN3]

ENVIRONMENTAL LAW §32

Clean Water Act -- federal license -- compliance with state standards --

Headnote:[3A][3B]

Although 401(d) of the Clean Water Act (33 USCS 1341(d))--providing that any certification under 401 of the Act (33 USCS 1341), which requires states to provide a water quality certification before a federal license or permit can be issued for activities that might result in any discharge into intrastate navigable waters, shall set forth any effluent limitations and other limitations necessary to assure that any applicant will comply with various provisions, including certain specified statutory provisions, of the Act, and with appropriate state law requirements--authorizes a state to place restrictions on the activity as a whole, that authority is not unbounded; however, insuring compliance with 303 of the Act (33 USCS 1313), which requires each state, subject to federal approval, to institute comprehensive standards establishing water quality goals for all intrastate waters, is a proper function of the 401 certification, because, although 303 is not one of the statutory provisions listed in 401(d), the statute allows states to impose limitations to insure compliance with 301 of the Act (33 USCS 1311), and 301 in turn incorporates 303 by reference.

[***LEdHN4]

ENVIRONMENTAL LAW §32

Clean Water Act -- federal license -- state minimum stream flow requirement -- protection of fish habitat --

Headnote:[4A][4B]

With respect to the determination of the United States Supreme Court that pursuant to 401 of the Clean Water Act (33 USCS 1341), which requires states to provide a water quality certification before a federal license or permit can be issued for activities that might result in any discharge into intrastate navigable waters, states may condition certification upon any limitations necessary to insure compliance with state water quality standards or any other appropriate requirement of state law, a minimum stream flow requirement of between 100 and 200 cubic feet per second imposed by a state environmental agency for certification for a proposed hydroelectric project on a river with a state-designated use as a fish habitat is such a necessary limitation, because (1) the designated use directly reflects the Act's goal (stated in 33 USCS 1251(a)) of maintaining the chemical, physical, and biological integrity of the nation's waters, (2) pursuant to 401(d), the state may require that a permit applicant comply with both the designated uses and the water quality criteria of the state standards, and a certification requirement that an applicant operate the project consistently with the designated uses of the water body and the water quality criteria is both a limitation to assure compliance with limitations imposed under 303 of the Act (33 USCS 1313), which requires each state to institute standards establishing water quality goals for intrastate waters, and an appropriate requirement of state law, (3) Environmental Protection Agency (EPA) regulations implicitly recognize that in some circumstances, criteria alone are insufficient to protect a designated use, (4) the Act permits enforcement of broad, narrative criteria which cannot reasonably be expected to anticipate all the water quality issues arising from every activity which can affect the state's hundreds of individual water bodies, (5) the minimum flow requirement is a proper application of the state and federal antidegradation regulations, as the requirement insures that an existing instream water use will be maintained and protected, (6) there is recognition in the Act itself that reduced stream flow can constitute water pollution, where the Act's definition of water pollution (under 33 USCS 1362(19)) encompasses the effects of reduced water quantity and 304 of the Act (33 USCS 1314(f)) expressly recognizes that water pollution may result from changes in the flow of navigable waters, which concern is also embodied in the EPA regulations, (7) 101(g) and 510(2) of the Act (33 USCS 1251(g), 1370(2)) preserve the authority of each state to allocate water quantity as between users, (8) the certification merely determines the nature of the use to which that proprietary right of the parties seeking to build the hydroelectric project may be put under the Act, and (9) this view is reinforced by the legislative history of the 1977 amendment to the Act adding 101(g), which history indicates that the purpose of the amendment is not to prohibit incidental effects of the requirements of the Act on individual water rights, but to insure that state allocation systems are not subverted and that any effects on individual rights are prompted by legitimate and necessary water quality standards. (Thomas and Scalia, JJ., dissented from this holding.)

SYLLABUS

Section 303 of the Clean Water Act requires each State, subject to federal approval, to institute comprehensive standards establishing water quality goals for all intrastate waters, and requires that such standards "consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses." Under Environmental Protection Agency (EPA) regulations, the standards must also include an antidegradation policy to ensure that "existing instream water uses and the level of water quality necessary to protect [those] uses [are] maintained and protected." States are required by § 401 of the Act to provide a water quality certification before a federal license or permit can be issued for any activity that may result in a discharge into intrastate navigable waters. As relevant

here, the certification must "set forth any effluent limitations and other limitations . . . necessary to assure that any applicant" will comply with various provisions of the Act and "any other appropriate" state law requirement. § 401(d). Under Washington's comprehensive water quality standards, characteristic uses of waters classified as Class AA include fish migration, rearing, and spawning. Petitioners, a city and a local utility district, want to build a hydroelectric project on the Dosewallips River, a Class AA water, which would reduce the water flow in the relevant part of the river to a minimal residual flow of between 65 and 155 cubic feet per second (cfs). In order to protect the river's fishery, respondent state environmental agency issued a § 401 certification imposing, among other things, a minimum stream flow requirement of between 100 and 200 cfs. A state administrative appeals board ruled that the certification condition exceeded respondent's authority under state law, but the State Superior Court reversed. The State Supreme Court affirmed, holding that the antidegradation provisions of the State's water quality standards require the imposition of minimum stream flows, and that § 401 authorized the stream flow condition and conferred on States power to consider all state action related to water quality in imposing conditions on § 401 certificates.

Held:

Washington's minimum stream flow requirement is a permissible condition of a § 401 certification. Pp. 710-723.

(a) A State may impose conditions on certifications insofar as necessary to enforce a designated use contained in the State's water quality standard. Petitioners' claim that the State may only impose water quality limitations specifically tied to a "discharge" is contradicted by § 401(d)'s reference to an applicant's compliance, which allows a State to impose "other limitations" on a project. This view is consistent with EPA regulations providing that activities -- not merely discharges -- must comply with state water quality standards, a reasonable interpretation of § 401 which is entitled to deference. State standards adopted pursuant to § 303 are among the "other limitations" with which a State may ensure compliance through the § 401 certification process. Although § 303 is not specifically listed in § 401(d), the statute allows States to impose limitations to ensure compliance with § 301 of the Act, and § 301 in turn incorporates § 303 by reference. EPA's view supports this interpretation. Such limitations are also permitted by § 401(d)'s reference to "any other appropriate" state law requirement. Pp. 710-713.

(b) Washington's requirement is a limitation necessary to enforce the designated use of the river as a fish habitat. Petitioners err in asserting that § 303 requires States to protect such uses solely through implementation of specific numerical "criteria." The section's language makes it plain that water quality standards contain two components and is most naturally read to require that a project be consistent with both: the designated use and the water quality criteria. EPA has not interpreted § 303 to require the States to protect designated uses exclusively through enforcement of numerical criteria. Moreover, the Act permits enforcement of broad, narrative criteria based on, for example, "aesthetics." There is no anomaly in the State's reliance on both use designations and criteria to protect water quality. Rather, it is petitioners' reading that leads to an unreasonable interpretation of the Act, since specified criteria cannot reasonably be expected to anticipate all the water quality issues arising from every activity that can affect a State's hundreds of individual water bodies. Washington's requirement also is a proper application of the state and federal antidegradation regulations, as it ensures that an existing instream water use will be "maintained and protected." Pp. 713-719.

(c) Petitioners' assertion that the Act is only concerned with water quality, not quantity, makes an artificial distinction, since a sufficient lowering of quantity could destroy all of a river's designated uses, and since the Act recognizes that reduced stream flow can constitute water pollution. Moreover, §§ 101(g) and 510(2) of the Act do not limit the scope of water pollution controls that may be imposed on users who have obtained, pursuant to state law, a water allocation. Those provisions preserve each State's authority to allocate water quantity as between users, but the § 401 certification does not purport to determine petitioners' proprietary right to the river's water. In addition, the Court is unwilling to read implied limitations into § 401 based on petitioners' claim that a conflict exists between the condition's imposition and the Federal Energy Regulatory Commission's authority to license hydroelectric projects under the Federal Power Act, since FERC has not yet acted on petitioners' license application and since § 401's certification requirement also applies to other statutes and regulatory schemes. Pp. 719-723.

COUNSEL: Howard E. Shapiro argued the cause for petitioners. With him on the briefs were Michael A. Swiger, Gary D. Bachman, Albert R. Malanca, and Kenneth G. Kieffer.

Christine O. Gregoire, Attorney General of Washington, argued the cause for respondents. With her on the briefs were Jay J. Manning, Senior Assistant Attorney General, and William C. Frymire, Assistant Attorney General.

Deputy Solicitor General Wallace argued the cause for the United States as amicus curiae urging affirmance.

With him on the brief were Solicitor General Days, Acting Assistant Attorney General Schiffer, James A. Feldman, and Anne S. Almy.*

* Briefs of amici curiae urging reversal were filed for the American Forest & Paper Association et al. by John R. Molm, Winifred D. Simpson, and James A. Lamberth; for Niagara Mohawk Power Corp. by Edward Berlin, Kenneth G. Jaffe, Paul J. Kaleta, Brian K. Billinson, and Timothy P. Sheehan; for the Northwest Hydroelectric Association by Richard M. Glick and Lory J. Kraut; for Pacific Northwest Utilities by Sherilyn Peterson and R. Gerard Lutz; and for the Western Urban Water Coalition by Benjamin S. Sharp and Guy R. Martin.

Briefs of amici curiae urging affirmance were filed for the State of Vermont et al. by Jeffrey L. Amestoy, Attorney General of Vermont, and Ronald A. Shems, Assistant Attorney General, Robert Abrams, Attorney General of New York, and Kathleen Liston Morrison, Assistant Attorney General, Grant Woods, Attorney General of Arizona, Winston Bryant, Attorney General of Arkansas, Daniel E. Lungren, Attorney General of California, Richard Blumenthal, Attorney General of Connecticut, Charles M. Oberly III, Attorney General of Delaware, Robert A. Butterworth, Attorney General of Florida, Michael J. Bowers, Attorney General of Georgia, Robert A. Marks, Attorney General of Hawaii, Larry EchoHawk, Attorney General of Idaho, Roland A. Burris, Attorney General of Illinois, Pamela Fanning Carter, Attorney General of Indiana, Bonnie J. Campbell, Attorney General of Iowa, Robert T. Stephan, Attorney General of Kansas, Chris Gorman, Attorney General of Kentucky, Michael E. Carpenter, Attorney General of Maine, J. Joseph Curran, Jr., Attorney General of Maryland, Scott Harshbarger, Attorney General of Massachusetts, Frank J. Kelley, Attorney General of Michigan, Hubert H. Humphrey III, Attorney General of Minnesota, Mike Moore, Attorney General of Mississippi, Jeremiah W. Nixon, Attorney General of Missouri, Joseph P. Mazurek, Attorney General of Montana, Don Stenberg, Attorney General of Nebraska, Frankie Sue Del Papa, Attorney General of Nevada, Jeffrey R. Howard, Attorney General of New Hampshire, Fred DeVesa, Acting Attorney General of New Jersey, Tom Udall, Attorney General of New Mexico, Michael F. Easley, Attorney General of North Carolina, Heidi Heitkamp, Attorney General of North Dakota, Lee Fisher, Attorney General of Ohio, Susan B. Loving, Attorney General of Oklahoma, Theodore R. Kulongoski, Attorney General of Oregon, Ernest D. Preate, Jr., Attorney General of Pennsylvania, Jefferey B. Pine, Attorney General of Rhode Island, T. Travis Medlock, Attorney General of South Carolina, Charles W. Burson, Attorney General of Tennessee, Dan Morales, Attorney General of Texas, Jan Graham, Attorney General of Utah, Stephen D. Rosenthal, Attorney General of Virginia, Darrell V. McGraw, Jr., Attorney General of West Virginia, James E. Doyle, Attorney General of Wisconsin, Joseph B. Meyer, Attorney General of Wyoming, and John Payton, Corporation Counsel of the District of Columbia; and for American Rivers et al. by Paul M. Smith.

JUDGES: O'CONNOR, J., delivered the opinion of the Court, in which REHNQUIST, C. J., and BLACKMUN, STEVENS, KENNEDY, SOUTER, and GINSBURG, JJ., joined. STEVENS, J., filed a concurring opinion, post, p. 723. THOMAS, J., filed a dissenting opinion, in which SCALIA, J., joined, post, p. 724.

OPINION BY: O'CONNOR

OPINION

[*703] [***723] [**1905] JUSTICE O'CONNOR delivered the opinion of the Court.

[***LEdHR1A] [1A]Petitioners, a city and a local utility district, want to build a hydroelectric project on the Dosewallips River in Washington State. We must decide whether respondent state environmental agency (hereinafter respondent) properly conditioned a permit for the project on the maintenance of specific minimum stream flows to protect salmon and steelhead runs.

[*704] I

This case involves the complex statutory and regulatory scheme that governs our Nation's waters, a scheme that implicates both federal and state administrative responsibilities. The Federal Water Pollution Control Act, commonly known as the Clean Water Act, 86 Stat. 816, as amended, 33 U.S.C. § 1251 *et seq.*, is a comprehensive water quality statute designed to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." § 1251(a). The Act also seeks to attain "water quality which provides for the protection and propagation of fish, shellfish, and wildlife." § 1251(a)(2).

To achieve these ambitious goals, the Clean Water Act establishes distinct roles for the Federal and State Governments. Under the Act, the Administrator of the

Environmental Protection Agency (EPA) is required, among other things, to establish and enforce technology-based limitations on individual discharges into the country's navigable waters from point sources. See §§ 1311, 1314. Section 303 of the Act also requires each State, subject to federal approval, to institute comprehensive water quality standards establishing water quality goals for all intrastate waters. §§ 1311(b)(1)(C), 1313. These state water quality standards provide "a supplementary basis . . . so that numerous point sources, despite individual compliance with effluent limitations, may be further regulated to prevent water quality from falling below acceptable levels." *EPA v. California ex rel. State Water Resources Control Bd.*, 426 U.S. 200, 205, n. 12, 48 L. Ed. 2d 578, 96 S. Ct. 2022 (1976).

[HN1]A state water quality standard "shall consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses." 33 U.S.C. § 1313(c)(2)(A). In setting standards, the State must comply with the following broad requirements:

> "Such standards shall be such as to protect the public health or welfare, enhance the quality of water and [*705] serve the purposes of this chapter. Such standards shall be established taking into consideration their use and value for public water supplies, propagation of fish and wildlife, recreational [and other purposes.]" *Ibid.*

See also § 1251(a)(2).

A 1987 amendment to the Clean Water Act makes clear that § 303 also contains an "antidegradation policy" -- that is, a policy requiring [**1906] that state standards be sufficient to maintain existing beneficial uses of navigable waters, preventing their further degradation. Specifically, the Act permits the revision of certain effluent limitations or water quality [***724] standards "only if such revision is subject to and consistent with the antidegradation policy established under this section." § 1313(d)(4)(B). Accordingly, EPA's regulations implementing the Act require that state water quality standards include "a statewide antidegradation policy" to ensure that "existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected." 40 CFR § 131.12 (1993). At a minimum, state water quality standards must satisfy these conditions. The Act also allows States to impose more stringent water quality controls. See 33 U.S.C. §§ 1311(b)(1)(C), 1370. See also 40 CFR § 131.4(a) (1993) ("As recognized by section 510 of the Clean Water Act[, 33 U.S.C. § 1370], States may develop water quality standards more stringent than required by this regulation").

The State of Washington has adopted comprehensive water quality standards intended to regulate all of the State's navigable waters. See Washington Administrative Code (WAC) 173-201-010 to 173-201-120 (1986). The State created an inventory of all the State's waters, and divided the waters into five classes. 173-201-045. Each individual fresh surface water of the State is placed into one of these classes. 173-201-080. The Dosewallips River is classified AA, extraordinary. 173-201-080(32). The water quality [*706] standard for Class AA waters is set forth at 173-201-045(1). The standard identifies the designated uses of Class AA waters as well as the criteria applicable to such waters. [1]

1 WAC 173-201-045(1) (1986) provides in pertinent part:

"(1) Class AA (extraordinary).

"(a) General characteristic. Water quality of this class shall markedly and uniformly exceed the requirements for all or substantially all uses.

"(b) Characteristic uses. Characteristic uses shall include, but not be limited to, the following:

"(i) Water supply (domestic, industrial, agricultural).

"(ii) Stock watering.

"(iii) Fish and shellfish:

"Salmonid migration, rearing, spawning, and harvesting.

"Other fish migration, rearing, spawning, and harvesting.

. . .

"(iv) Wildlife habitat.

"(v) Recreation (primary contact recreation, sport fishing, boating, and aesthetic enjoyment).

"(vi) Commerce and navigation.

"(c) Water quality criteria

"(i) Fecal coliform organisms.

"(A) Freshwater -- fecal coliform organisms shall not exceed a geometric mean value of 50 organisms/100 mL, with not more than 10 percent of samples exceeding 100 organisms/100 mL.

"(B) Marine water -- fecal coliform organisms shall not exceed a geometric mean value of 14 organisms/100 mL, with not more than 10 percent of samples exceeding 43 organisms/100 mL.

"(ii) Dissolved oxygen [shall exceed specific amounts].

. . .

"(iii) Total dissolved gas shall not exceed 110 percent of saturation at any point of sample collection.

"(iv) Temperature shall not exceed [certain levels].

. . .

"(v) pH shall be within [a specified range].

"(vi) Turbidity shall not exceed [specific levels].

"(vii) Toxic, radioactive, or deleterious material concentrations shall be less than those which may affect public health, the natural aquatic environment, or the desirability of the water for any use.

"(viii) Aesthetic values shall not be impaired by the presence of materials or their effects, excluding those of natural origin, which offend the senses of sight, smell, touch, or taste."

[*707] In addition to these specific standards applicable to Class AA waters, the State has adopted a statewide [***725] antidegradation policy. That policy provides:

"(a) Existing beneficial uses shall be maintained and protected and no further degradation which would interfere with or become injurious to existing beneficial uses will be allowed.

"(b) No degradation will be allowed of waters lying in national parks, national recreation areas, national wildlife refuges, national scenic rivers, and other areas of national ecological importance.

. . .

"(f) In no case, will any degradation of water quality be allowed if this degradation interferes with or becomes injurious to existing water uses and causes long-term [**1907] and irreparable harm to the environment." 173-201-035(8).

As required by the Act, EPA reviewed and approved the State's water quality standards. See 33 U.S.C. § 1313(c)(3); 42 Fed. Reg. 56792 (1977). Upon approval by EPA, the state standard became "the water quality standard for the applicable waters of that State." 33 U.S.C. § 1313(c)(3).

[HN2]States are responsible for enforcing water quality standards on intrastate waters. § 1319(a). In addition to these primary enforcement responsibilities, § 401 of the Act requires States to provide a water quality certification before a federal license or permit can be issued for activities that may result in any discharge into intrastate navigable waters. 33 U.S.C. § 1341. Specifically, § 401 requires an applicant for a federal license or permit to conduct any activity "which may result in any discharge into the navigable waters" to obtain from the State a certification "that any such discharge will comply with the applicable provisions of sections [1311, 1312, 1313, 1316, and 1317 of this title]." 33 U.S.C. § 1341(a). Section 401(d) further provides that "any certification [*708] . . . shall set forth any effluent limitations and other limitations, and monitoring requirements necessary to assure that any applicant . . . will comply with any applicable effluent limitations and other limitations, under section [1311 or 1312 of this title] . . . and with any other appropriate requirement of State law set forth in such certification." 33 U.S.C. § 1341(d). The limitations included in the certification become a condition on any federal license. *Ibid.* [2]

2 Section 401, as set forth in [HN3]33 U.S.C. § 1341, provides in relevant part:

"(a) Compliance with applicable requirements; application; procedures; license suspension

"(1) Any applicant for a Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters, shall provide the licensing or permitting agency a certification from the State . . . that any such discharge will comply with the applicable provisions of sections 1311, 1312, 1313, 1316, and 1317 of this title.

. . .

"(d) Limitations and monitoring requirements of certification

"Any certification provided under this section shall set forth any effluent limitations and other limitations, and monitoring requirements necessary to assure that any applicant for a Federal license or permit will comply with any applicable effluent limitations and other limitations, under section 1311 or 1312 of this title, standard of performance under section 1316 of this title, or prohibition, effluent standard, or pretreatment standard under section 1317 of this title, and with any other appropriate requirement of State law set forth in such certification, and shall become a condition on any Federal license or permit subject to the provisions of this section."

[***726] II

Petitioners propose to build the Elkhorn Hydroelectric Project on the Dosewallips River. If constructed as presently planned, the facility would be located just outside the Olympic National Park on federally owned land within the Olympic National Forest. The project would divert water from a 1.2-mile reach of the river (the bypass reach), run the [*709] water through turbines to generate electricity and then return the water to the river below the bypass reach. Under the Federal Power Act (FPA), 41 Stat. 1063, as amended, 16 U.S.C. § 791a *et seq.*, the Federal Energy Regulatory Commission (FERC) has authority to license new hydroelectric facilities. As a result, petitioners must get a FERC license to build or operate the Elkhorn Project. Because a federal license is required, and because the project may result in discharges into the Dosewallips River, petitioners are also required to obtain state certification of the project pursuant to § 401 of the Clean Water Act, 33 U.S.C. § 1341.

The water flow in the bypass reach, which is currently undiminished by appropriation, ranges seasonally between 149 and 738 cubic feet per second (cfs). The Dosewallips supports two species of salmon, coho and chinook, as well as steelhead trout. As originally proposed, the project was to include a diversion dam which would completely block [**1908] the river and channel approximately 75% of the river's water into a tunnel alongside the streambed. About 25% of the water would remain in the bypass reach, but would be returned to the original riverbed through sluice gates or a fish ladder. Depending on the season, this would leave a residual minimum flow of between 65 and 155 cfs in the river. Respondent undertook a study to determine the minimum stream flows necessary to protect the salmon and steelhead fishery in the bypass reach. On June 11, 1986, respondent issued a § 401 water quality certification imposing a variety of conditions on the project, including a minimum stream flow requirement of between 100 and 200 cfs depending on the season.

A state administrative appeals board determined that the minimum flow requirement was intended to enhance, not merely maintain, the fishery, and that the certification condition therefore exceeded respondent's authority under state law. App. to Pet. for Cert. 55a-57a. On appeal, the [*710] State Superior Court concluded that respondent could require compliance with the minimum flow conditions. *Id.*, at 29a-45a. The Superior Court also found that respondent had imposed the minimum flow requirement to protect and preserve the fishery, not to improve it, and that this requirement was authorized by state law. *Id.*, at 34a.

The Washington Supreme Court held that the antidegradation provisions of the State's water quality standards require the imposition of minimum stream flows. 121 Wash. 2d 179, 186-187, 849 P.2d 646, 650 (1993). [***727] The court also found that § 401(d), which allows States to impose conditions based upon several enumerated sections of the Clean Water Act and "any other appropriate requirement of State law," 33 U.S.C. § 1341(d), authorized the stream flow condition. Relying on this language and the broad purposes of the Clean Water Act, the court concluded that § 401(d) confers on States power to "consider all state action related to water quality in imposing conditions on section 401 certificates." 121 Wash. 2d at 192, 849 P.2d at 652. We granted certiorari, 510 U.S. 810 (1993), to resolve a conflict among the state courts of last resort. See 121 Wash. 2d 179, 849 P.2d 646 (1993); *Georgia Pacific Corp. v. Dept. of Environmental Conservation*, 159 Vt. 639, 628 A.2d 944 (1992) (table); *Power Authority of New York v. Williams*, 60 N.Y.2d 315, 457 N.E.2d 726, 469 N.Y.S.2d 620 (1983). We now affirm.

III

[***LEdHR1B] [1B]The principal dispute in this case concerns whether the minimum stream flow requirement that the State imposed on the Elkhorn Project is a permissible condition of a § 401 certification under the Clean Water Act. To resolve this dispute we must first determine the scope of the State's authority under § 401. We must then determine whether the limitation at issue here, the requirement that petitioners maintain minimum stream flows, falls within the scope of that authority.

[*711] A

There is no dispute that petitioners were required to obtain a certification from the State pursuant to § 401. Petitioners concede that, at a minimum, the project will result in two possible discharges -- the release of dredged and fill material during the construction of the project, and the discharge of water at the end of the tailrace after the water has been used to generate electricity. Brief for Petitioners 27-28. Petitioners contend, however, that the

minimum stream flow requirement imposed by the State was unrelated to these specific discharges, and that as a consequence, the State lacked the authority under § 401 to condition its certification on maintenance of stream flows sufficient to protect the Dosewallips fishery.

[***LEdHR2A] [2A]If § 401 consisted solely of subsection (a), which refers to a state certification that a "discharge" will comply with certain provisions of the Act, petitioners' assessment of the scope of the State's certification authority would have considerable force. Section 401, however, also contains subsection (d), which expands the State's authority to impose conditions on the certification of a [**1909] project. Section 401(d) provides that any certification shall set forth "any effluent limitations and other limitations . . . necessary to assure that *any applicant*" will comply with various provisions of the Act and appropriate state law requirements. 33 U.S.C. § 1341(d) (emphasis added). The language of this subsection contradicts petitioners' claim that the State may only impose water quality limitations specifically tied to a "discharge." The text refers to the compliance of the applicant, not the discharge. Section 401(d) thus allows the State to impose "other limitations" on the project in general to assure compliance with various provisions of the Clean Water Act and with "any other appropriate [***728] requirement of State law." Although the dissent asserts that this interpretation of § 401(d) renders § 401(a)(1) superfluous, *post*, at 726, we see no such anomaly. Section 401(a)(1) identifies the category of activities [*712] subject to certification -- namely, those with discharges. And § 401(d) is most reasonably read as authorizing additional conditions and limitations on the activity as a whole once the threshold condition, the existence of a discharge, is satisfied.

Our view of the statute is consistent with EPA's regulations implementing § 401. The regulations expressly interpret § 401 as requiring the State to find that "there is a reasonable assurance that the *activity* will be conducted in a manner which will not violate applicable water quality standards." 40 CFR § 121.2(a)(3) (1993) (emphasis added). See also EPA, Wetlands and 401 Certification 23 (Apr. 1989) ("In 401(d), the Congress has given the States the authority to place any conditions on a water quality certification that are necessary to assure that the applicant will comply with effluent limitations, water quality standards, . . . and with 'any other appropriate requirement of State law'"). EPA's conclusion that *activities* -- not merely discharges -- must comply with state water quality standards is a reasonable interpretation of § 401, and is entitled to deference. See, *e. g.*, *Arkansas v. Oklahoma*, 503 U.S. 91, 110, 117 L. Ed. 2d 239, 112 S. Ct. 1046 (1992); *Chevron* U.S. *A. Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837, 81 L. Ed. 2d 694, 104 S. Ct. 2778 (1984).

[***LEdHR3A] [3A]Although § 401(d) authorizes the State to place restrictions on the activity as a whole, that authority is not unbounded. The State can only ensure that the project complies with "any applicable effluent limitations and other limitations, under [33 U.S.C. §§ 1311, 1312]" or certain other provisions of the Act, "and with any other appropriate requirement of State law." 33 U.S.C. § 1341(d). The State asserts that the minimum stream flow requirement was imposed to ensure compliance with the state water quality standards adopted pursuant to § 303 of the Clean Water Act, 33 U.S.C. § 1313.

[***LEdHR2B] [2B] [***LEdHR3B] [3B]We agree with the State that ensuring compliance with § 303 is a proper function of the § 401 certification. Although § 303 is not one of the statutory provisions listed in § 401(d), [*713] the statute allows States to impose limitations to ensure compliance with § 301 of the Act, 33 U.S.C. § 1311. Section 301 in turn incorporates § 303 by reference. See 33 U.S.C. § 1311(b)(1)(C); see also H. R. Conf. Rep. No. 95-830, p. 96 (1977) ("Section 303 is always included by reference where section 301 is listed"). As a consequence, [HN4]state water quality standards adopted pursuant to § 303 are among the "other limitations" with which a State may ensure compliance through the § 401 certification process. This interpretation is consistent with EPA's view of the statute. See 40 CFR § 121.2(a)(3) (1992); EPA, Wetlands and 401 Certification, *supra*. Moreover, limitations to assure compliance with state water quality standards are also permitted by § 401(d)'s reference to "any other appropriate requirement of State law." We do not speculate on what additional state laws, if any, might be incorporated by this language. [3] [***729] [**1910] But at a minimum, limitations imposed pursuant to state water quality standards adopted pursuant to § 303 are "appropriate" requirements of state law. Indeed, petitioners appear to agree that the State's authority under § 401 includes limitations designed to ensure compliance with state water quality standards. Brief for Petitioners 9, 21.

3 The dissent asserts that § 301 is concerned solely with discharges, not broader water quality standards. *Post*, at 730, n. 2. Although § 301 does make certain discharges unlawful, see 33 U.S.C. § 1311(a), it also contains a broad enabling provision which requires States to take certain actions, to wit: "In order to carry out the objective of this chapter [viz. the chemical, physical, and biological integrity of the Nation's water] there shall be achieved . . . not later than July 1, 1977, any more stringent limitation, including those necessary to meet water quality standards, . . . established pursuant to any State law or regula-

tions . . . ." 33 U.S.C. § 1311(b)(1)(C). This provision of § 301 expressly refers to state water quality standards, and is not limited to discharges.

B

[***LEdHR1C] [1C] [***LEdHR4A] [4A]Having concluded that, [HN5]pursuant to § 401, States may condition certification upon any limitations necessary to ensure [*714] compliance with state water quality standards or any other "appropriate requirement of State law," we consider whether the minimum flow condition is such a limitation. Under § 303, state water quality standards must "consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses." 33 U.S.C. § 1313(c)(2)(A). In imposing the minimum stream flow requirement, the State determined that construction and operation of the project as planned would be inconsistent with one of the designated uses of Class AA water, namely "salmonid [and other fish] migration, rearing, spawning, and harvesting." App. to Pet. for Cert. 83a-84a. The designated use of the river as a fish habitat directly reflects the Clean Water Act's goal of maintaining the "chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). Indeed, the Act defines pollution as "the man-made or man induced alteration of the chemical, physical, biological, and radiological integrity of water." § 1362(19). Moreover, the Act expressly requires that, in adopting water quality standards, the State must take into consideration the use of waters for "propagation of fish and wildlife." § 1313(c)(2)(A).

Petitioners assert, however, that § 303 requires the State to protect designated uses solely through implementation of specific "criteria." According to petitioners, the State may not require them to operate their dam in a manner consistent with a designated "use"; instead, say petitioners, under § 303 the State may only require that the project comply with specific numerical "criteria."

[***LEdHR4B] [4B]We disagree with petitioners' interpretation of the language of § 303(c)(2)(A). Under the statute, a water quality standard must "consist of the designated uses of the navigable waters involved *and* the water quality criteria for such waters based upon such uses." 33 U.S.C. § 1313(c)(2)(A) (emphasis added). The text makes it plain that water quality standards contain two components. We think the language [*715] of § 303 is most naturally read to require [***730] that a project be consistent with *both* components, namely, the designated use *and* the water quality criteria. Accordingly, under the literal terms of the statute, a project that does not comply with a designated use of the water does not comply with the applicable water quality standards.

Consequently, [HN6]pursuant to § 401(d) the State may require that a permit applicant comply with both the designated uses and the water quality criteria of the state standards. In granting certification pursuant to § 401(d), the State "shall set forth any . . . limitations . . . necessary to assure that [the applicant] will comply with any . . . limitations under [§ 303] . . . and with any other appropriate requirement of State law." A certification requirement that an applicant operate the project consistently with state water quality standards -- *i. e.*, consistently with the designated uses of the water body and the water quality criteria -- is both a "limitation" to assure "compl[iance] with . . . [**1911] limitations" imposed under § 303, and an "appropriate" requirement of state law.

EPA has not interpreted § 303 to require the States to protect designated uses exclusively through enforcement of numerical criteria. In its regulations governing state water quality standards, EPA defines criteria as "*elements* of State water quality standards, expressed as constituent concentrations, levels, or narrative statements, representing a quality of water that supports a particular use." 40 CFR § 131.3(b) (1993) (emphasis added). The regulations further provide that "when criteria are met, water quality will *generally* protect the designated use." *Ibid.* (emphasis added). Thus, the EPA regulations implicitly recognize that in some circumstances, criteria alone are insufficient to protect a designated use.

Petitioners also appear to argue that use requirements are too open ended, and that the Act only contemplates enforcement of the more specific and objective "criteria." But this argument is belied by the open-ended nature of the criteria [*716] themselves. As the Solicitor General points out, even "criteria" are often expressed in broad, narrative terms, such as "'there shall be no discharge of toxic pollutants in toxic amounts.'" Brief for United States as *Amicus Curiae* 18. See *American Paper Institute, Inc. v. EPA*, 302 U.S. App. D.C. 80, 996 F.2d 346, 349 (CADC 1993). In fact, under the Clean Water Act, only one class of criteria, those governing "toxic pollutants listed pursuant to section 1317(a)(1)," need be rendered in numerical form. See 33 U.S.C. § 1313(c)(2)(B); 40 CFR § 131.11(b)(2) (1993).

Washington's Class AA water quality standards are typical in that they contain several open-ended criteria which, like the use designation of the river as a fishery, must be translated into specific limitations for individual projects. For example, the standards state that "toxic, radioactive, or deleterious material concentrations shall be less than those which may affect public health, the natural aquatic environment, or the desirability of the water for any use." WAC 173-201-045(1)(c)(vii) (1986). Similarly, the state standards specify that "aesthetic values shall not be impaired by the presence of materials or

their effects, excluding those of natural origin, which offend the senses of sight, smell, touch, or taste." 173-201-045(1)(c)(viii). We think petitioners' [***731] attempt to distinguish between uses and criteria loses much of its force in light of the fact that the Act permits enforcement of broad, narrative criteria based on, for example, "aesthetics."

Petitioners further argue that enforcement of water quality standards through use designations renders the water quality criteria component of the standards irrelevant. We see no anomaly, however, in the State's reliance on both use designations and criteria to protect water quality. The specific numerical limitations embodied in the criteria are a convenient enforcement mechanism for identifying minimum water conditions which will generally achieve the requisite water quality. And, in most circumstances, satisfying the criteria will, as EPA recognizes, be sufficient to maintain the [*717] designated use. See 40 CFR § 131.3(b) (1993). Water quality standards, however, apply to an entire class of water, a class which contains numerous individual water bodies. For example, in the State of Washington, the Class AA water quality standard applies to 81 specified fresh surface waters, as well as to all "surface waters lying within the mountainous regions of the state assigned to national parks, national forests, and/or wilderness areas," all "lakes and their feeder streams within the state," and all "unclassified surface waters that are tributaries to Class AA waters." WAC 173-201-070 (1986). While enforcement of criteria will in general protect the uses of these diverse waters, a complementary requirement that activities also comport with designated uses enables the States to ensure that each activity -- even if not foreseen by the criteria -- will be consistent with the specific uses and attributes of a particular body of water.

Under petitioners' interpretation of the statute, however, if a particular criterion, such as turbidity, were missing from the list [**1912] contained in an individual state water quality standard, or even if an existing turbidity criterion were insufficient to protect a particular species of fish in a particular river, the State would nonetheless be forced to allow activities inconsistent with the existing or designated uses. We think petitioners' reading leads to an unreasonable interpretation of the Act. The criteria components of state water quality standards attempt to identify, for all the water bodies in a given class, water quality requirements generally sufficient to protect designated uses. These criteria, however, cannot reasonably be expected to anticipate all the water quality issues arising from every activity that can affect the State's hundreds of individual water bodies. Requiring the States to enforce only the criteria component of their water quality standards would in essence require the States to study to a level of great specificity each individual surface water to ensure that the criteria applicable to that water are sufficiently detailed and individualized to fully protect the [*718] water's designated uses. Given that there is no textual support for imposing this requirement, we are loath to attribute to Congress an intent to impose this heavy regulatory burden on the States.

The State also justified its minimum stream flow as necessary to implement the "antidegradation policy" of § 303, 33 U.S.C. § 1313(d)(4)(B). When the Clean Water Act was enacted in 1972, the water quality standards of [***732] all 50 States had antidegradation provisions. These provisions were required by federal law. See U.S. Dept. of Interior, Federal Water Pollution Control Administration, Compendium of Department of Interior Statements on Non-degradation of Interstate Waters 1-2 (Aug. 1968); see also Hines, A Decade of Nondegradation Policy in Congress and the Courts: The Erratic Pursuit of Clean Air and Clean Water, 62 Iowa L. Rev. 643, 658-660 (1977). By providing in 1972 that existing state water quality standards would remain in force until revised, the Clean Water Act ensured that the States would continue their antidegradation programs. See 33 U.S.C. § 1313(a). EPA has consistently required that revised state standards incorporate an antidegradation policy. And, in 1987, Congress explicitly recognized the existence of an "antidegradation policy established under [§ 303]." § 1313(d)(4)(B).

EPA has promulgated regulations implementing § 303's antidegradation policy, a phrase that is not defined elsewhere in the Act. These regulations require States to "develop and adopt a statewide antidegradation policy and identify the methods for implementing such policy." 40 CFR § 131.12 (1993). These "implementation methods shall, at a minimum, be consistent with the . . . existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected." *Ibid.* EPA has explained that under its antidegradation regulation, "no activity is allowable . . . which could partially or completely eliminate any existing use." EPA, Questions and [*719] Answers on Antidegradation 3 (Aug. 1985). Thus, States must implement their antidegradation policy in a manner "consistent" with existing uses of the stream. The State of Washington's antidegradation policy in turn provides that "existing beneficial uses shall be maintained and protected and no further degradation which would interfere with or become injurious to existing beneficial uses will be allowed." WAC 173-201-035(8)(a) (1986). The State concluded that the reduced stream flows would have just the effect prohibited by this policy. The Solicitor General, representing EPA, asserts, Brief for United States as *Amicus Curiae* 18-21, and we agree, that the State's minimum stream flow condition is a proper application

of the state and federal antidegradation regulations, as it ensures that an "existing instream water use" will be "maintained and protected." 40 CFR § 131.12(a)(1) (1993).

Petitioners also assert more generally that the Clean Water Act is only concerned with water "quality," and does not allow the regulation of water "quantity." This is an artificial distinction. In many cases, water quantity is closely related to water quality; a sufficient lowering of the [**1913] water quantity in a body of water could destroy all of its designated uses, be it for drinking water, recreation, navigation or, as here, as a fishery. In any event, [HN7]there is recognition in the Clean Water Act itself that reduced stream flow, *i. e.*, diminishment of water quantity, can constitute water pollution. First, the Act's definition of pollution as "the man-made or man induced alteration of the chemical, physical, biological, and radiological integrity of water" encompasses the effects of reduced water quantity. 33 U.S.C. § 1362(19). This broad conception of pollution -- one which [***733] expressly evinces Congress' concern with the physical and biological integrity of water -- refutes petitioners' assertion that the Act draws a sharp distinction between the regulation of water "quantity" and water "quality." Moreover, § 304 of the Act expressly recognizes that water "pollution" may result from "changes [*720] in the movement, flow, or circulation of any navigable waters . . ., including changes caused by the construction of dams." 33 U.S.C. § 1314(f). This concern with the flowage effects of dams and other diversions is also embodied in the EPA regulations, which expressly require existing dams to be operated to attain designated uses. 40 CFR § 131.10(g)(4) (1992).

Petitioners assert that two other provisions of the Clean Water Act, §§ 101(g) and 510(2), 33 U.S.C. §§ 1251(g) and 1370(2), exclude the regulation of water quantity from the coverage of the Act. Section 101(g) provides "that the authority of each State to allocate quantities of water within its jurisdiction shall not be superseded, abrogated or otherwise impaired by this chapter." 33 U.S.C. § 1251(g). Similarly, § 510(2) provides that nothing in the Act shall "be construed as impairing or in any manner affecting any right or jurisdiction of the States with respect to the waters . . . of such States." 33 U.S.C. § 1370. In petitioners' view, these provisions exclude "water quantity issues from direct regulation under the federally controlled water quality standards authorized in § 303." Brief for Petitioners 39 (emphasis deleted).

This language gives the States authority to allocate water rights; we therefore find it peculiar that petitioners argue that it prevents the State from regulating stream flow. In any event, we read these provisions more narrowly than petitioners. [HN8]Sections 101(g) and 510(2) preserve the authority of each State to allocate water quantity as between users; they do not limit the scope of water pollution controls that may be imposed on users who have obtained, pursuant to state law, a water allocation. In *California* v. *FERC*, 495 U.S. 490, 498, 109 L. Ed. 2d 474, 110 S. Ct. 2024 (1990), construing an analogous provision of the Federal Power Act, [4] we explained that "minimum stream [*721] flow requirements neither reflect nor establish 'proprietary rights'" to water. Cf. *First Iowa Hydro-Electric Cooperative* v. *FPC*, 328 U.S. 152, 176, 90 L. Ed. 1143, 66 S. Ct. 906, and n. 20 (1946). Moreover, the certification itself does not purport to determine petitioners' proprietary right to the water of the Dosewallips. In fact, the certification expressly states that a "State Water Right Permit (Chapters 90.03.250 RCW and 508-12 WAC) must be obtained prior to commencing construction of the project." App. to Pet. for Cert. 83a. The certification merely determines the nature of the use to which that proprietary right may be put under the Clean Water Act, if and when it is obtained from the State. Our view is reinforced by the legislative history of the 1977 [***734] amendment to the Clean Water Act adding § 101(g). See 3 Legislative History of the Clean Water Act of 1977 (Committee Print compiled for the Committee on Environment and Public Works by the Library of Congress), Ser. No. 95-14, p. 532 (1978) ("The requirements [of the Act] may incidentally affect individual water rights. . . . [**1914] It is not the purpose of this amendment to prohibit those incidental effects. It is the purpose of this amendment to insure that State allocation systems are not subverted, and that effects on individual rights, if any, are prompted by legitimate and necessary water quality considerations").

4 The relevant text of the Federal Power Act provides: "That nothing herein contained shall be construed as affecting or intending to affect or in any way to interfere with the laws of the respective States relating to the control, appropriation, use, or distribution of water used in irrigation or for municipal or other uses, or any vested right acquired therein." 41 Stat. 1077, 16 U.S.C. § 821.

IV

Petitioners contend that we should limit the State's authority to impose minimum flow requirements because FERC has comprehensive authority to license hydroelectric projects pursuant to the FPA, 16 U.S.C. § 791a *et seq.* In petitioners' view, the minimum flow requirement imposed here interferes with FERC's authority under the FPA.

[*722] The FPA empowers FERC to issue licenses for projects "necessary or convenient . . . for the development, transmission, and utilization of power

across, along, from, or in any of the streams . . . over which Congress has jurisdiction." § 797(e). The FPA also requires FERC to consider a project's effect on fish and wildlife. §§ 797(e), 803(a)(1). In *California v. FERC, supra*, we held that the California Water Resources Control Board, acting pursuant to state law, could not impose a minimum stream flow which conflicted with minimum stream flows contained in a FERC license. We concluded that the FPA did not "save" to the States this authority. *Id.*, 495 U.S. at 498.

[***LEdHR1D] [1D]No such conflict with any FERC licensing activity is presented here. FERC has not yet acted on petitioners' license application, and it is possible that FERC will eventually deny petitioners' application altogether. Alternatively, it is quite possible, given that FERC is required to give equal consideration to the protection of fish habitat when deciding whether to issue a license, that any FERC license would contain the same conditions as the state § 401 certification. Indeed, at oral argument the Deputy Solicitor General stated that both EPA and FERC were represented in this proceeding, and that the Government has no objection to the stream flow condition contained in the § 401 certification. Tr. of Oral Arg. 43-44.

Finally, the requirement for a state certification applies not only to applications for licenses from FERC, but to all federal licenses and permits for activities which may result in a discharge into the Nation's navigable waters. For example, a permit from the Army Corps of Engineers is required for the installation of any structure in the navigable waters which may interfere with navigation, including piers, docks, and ramps. Rivers and Harbors Appropriation Act of 1899, 30 Stat. 1151, § 10, 33 U.S.C. § 403. Similarly, a permit must be obtained from the Army Corps of Engineers [*723] for the discharge of dredged or fill material, and from the Secretary of the Interior or Agriculture for the construction of reservoirs, canals, and other water storage systems on federal land. See 33 U.S.C. §§ 1344(a), (e); 43 U.S.C. § 1761 (1988 ed. and Supp. IV). [***735] We assume that a § 401 certification would also be required for some licenses obtained pursuant to these statutes. Because § 401's certification requirement applies to other statutes and regulatory schemes, and because any conflict with FERC's authority under the FPA is hypothetical, we are unwilling to read implied limitations into § 401. If FERC issues a license containing a stream flow condition with which petitioners disagree, they may pursue judicial remedies at that time. Cf. *Escondido Mut. Water Co. v. La Jolla Band of Mission Indians*, 466 U.S. 765, 778, n. 20, 80 L. Ed. 2d 753, 104 S. Ct. 2105 (1984).

In summary, we hold that [HN9]the State may include minimum stream flow requirements in a certification issued pursuant to § 401 of the Clean Water Act insofar as necessary to enforce a designated use contained in a state water quality standard. The judgment of the Supreme Court of Washington, accordingly, is affirmed.

So ordered.

CONCUR BY: STEVENS

CONCUR

JUSTICE STEVENS, concurring.

While I agree fully with the thorough analysis in the Court's opinion, I add this comment [**1915] for emphasis. For judges who find it unnecessary to go behind the statutory text to discern the intent of Congress, this is (or should be) an easy case. Not a single sentence, phrase, or word in the Clean Water Act purports to place any constraint on a State's power to regulate the quality of its own waters more stringently than federal law might require. In fact, the Act explicitly recognizes States' ability to impose stricter standards. See, *e. g.*, § 301(b)(1)(C), 33 U.S.C. § 1311(b)(1)(C).

DISSENT BY: THOMAS

DISSENT

[*724] JUSTICE THOMAS, with whom JUSTICE SCALIA joins, dissenting.

The Court today holds that a State, pursuant to § 401 of the Clean Water Act, may condition the certification necessary to obtain a federal license for a proposed hydroelectric project upon the maintenance of a minimum flow rate in the river to be utilized by the project. In my view, the Court makes three fundamental errors. First, it adopts an interpretation that fails adequately to harmonize the subsections of § 401. Second, it places no meaningful limitation on a State's authority under § 401 to impose conditions on certification. Third, it gives little or no consideration to the fact that its interpretation of § 401 will significantly disrupt the carefully crafted federal-state balance embodied in the Federal Power Act. Accordingly, I dissent.

I

A

Section 401(a)(1) of the Federal Water Pollution Control Act, otherwise known as the Clean Water Act (CWA or Act), 33 U.S.C. § 1251 *et seq.*, provides that "any applicant for a Federal license or permit to conduct any activity . . ., which may result in any discharge into the navigable waters, shall provide the licensing or permitting agency a certification from the State in which the

discharge originates . . . that any such [***736] discharge will comply with . . . applicable provisions of [the CWA]." 33 U.S.C. § 1341(a)(1). The terms of § 401(a)(1) make clear that the purpose of the certification process is to ensure that discharges from a project will meet the requirements of the CWA. Indeed, a State's authority under § 401(a)(1) is limited to certifying that "any discharge" that "may result" from "any activity," such as petitioners' proposed hydroelectric project, will "comply" with the enumerated provisions of the CWA; if the discharge will fail to comply, the State may "deny" the certification. *Ibid.* In addition, under § 401(d), a State may place conditions on a [*725] § 401 certification, including "effluent limitations and other limitations, and monitoring requirements," that may be necessary to ensure compliance with various provisions of the CWA and with "any other appropriate requirement of State law." § 1341(d).

The minimum stream flow condition imposed by respondents in this case has no relation to any possible "discharge" that might "result" from petitioners' proposed project. The term "discharge" is not defined in the CWA, but its plain and ordinary meaning suggests "a flowing or issuing out," or "something that is emitted." Webster's Ninth New Collegiate Dictionary 360 (1991). Cf. 33 U.S.C. § 1362(16) ("The term 'discharge' when used without qualification includes a discharge of a pollutant, and a discharge of pollutants"). A minimum stream flow requirement, by contrast, is a limitation on the amount of water the project can take in or divert from the river. See *ante*, at 709. That is, a minimum stream flow requirement is a limitation on intake -- the opposite of discharge. Imposition of such a requirement would thus appear to be beyond a State's authority as it is defined by § 401(a)(1).

The Court remarks that this reading of § 401(a)(1) would have "considerable force," *ante*, at 711, were it not for what the Court understands to be the expansive terms of § 401(d). That subsection, as set forth in 33 U.S.C. § 1341(d), provides:

> "Any certification provided under this section shall set forth any effluent limitations and other limitations, and monitoring requirements necessary to assure that *any applicant* for a Federal license or permit [**1916] will comply with any applicable effluent limitations and other limitations, under section 1311 or 1312 of this title, standard of performance under section 1316 of this title, or prohibition, effluent standard, or pretreatment standard under section 1317 of this title, and with any other appropriate requirement of State law set forth in such certification, and shall become a condition on any Federal [*726] license or permit subject to the provisions of this section." (Emphasis added.)

According to the Court, the fact that § 401(d) refers to an "applicant," rather than a "discharge," complying with various provisions of the Act "contradicts petitioners' claim that the State may only impose water quality limitations specifically tied to a 'discharge.'" *Ante*, at 711. In the Court's view, § 401(d)'s reference to an applicant's compliance "expands" a State's authority beyond the limits set out in § 401(a)(1), *ibid.*, [***737] thereby permitting the State in its certification process to scrutinize the applicant's proposed "activity as a whole," not just the discharges that may result from the activity, *ante*, at 712. The Court concludes that this broader authority allows a State to impose conditions on a § 401 certification that are unrelated to discharges. *Ante*, at 711-712.

While the Court's interpretation seems plausible at first glance, it ultimately must fail. If, as the Court asserts, § 401(d) permits States to impose conditions unrelated to discharges in § 401 certifications, Congress' careful focus on discharges in § 401(a)(1) -- the provision that describes the scope and function of the certification process -- was wasted effort. The power to set conditions that are unrelated to discharges is, of course, nothing but a conditional power to deny certification for reasons unrelated to discharges. Permitting States to impose conditions unrelated to discharges, then, effectively eliminates the constraints of § 401(a)(1).

Subsections 401(a)(1) and (d) can easily be reconciled to avoid this problem. To ascertain the nature of the conditions permissible under § 401(d), § 401 must be read as a whole. See *United Sav. Assn. of Tex. v. Timbers of Inwood Forest Associates, Ltd.*, 484 U.S. 365, 371, 98 L. Ed. 2d 740, 108 S. Ct. 626 (1988) (statutory interpretation is a "holistic endeavor"). As noted above, § 401(a)(1) limits a State's authority in the certification process to addressing concerns related to discharges and to ensuring that any discharge resulting from a project will comply with specified provisions of the Act. It is reasonable [*727] to infer that the conditions a State is permitted to impose on certification must relate to the very purpose the certification process is designed to serve. Thus, while § 401(d) permits a State to place conditions on a certification to ensure compliance of the "applicant," those conditions must still be related to discharges. In my view, this interpretation best harmonizes the subsections of § 401. Indeed, any broader interpretation of § 401(d) would permit that subsection to swallow § 401(a)(1).

The text of § 401(d) similarly suggests that the conditions it authorizes must be related to discharges. The Court attaches critical weight to the fact that § 401(d) speaks of the compliance of an "applicant," but that reference, in and of itself, says little about the nature of the conditions that may be imposed under § 401(d). Rather, because § 401(d) conditions can be imposed only to ensure compliance with specified provisions of law -- that is, with "applicable effluent limitations and other limitations, under section 1311 or 1312 of this title, standard[s] of performance under section 1316 of this title, . . . prohibition[s], effluent standard[s], or pretreatment standard[s] under section 1317 of this title, [or] . . . any other appropriate requirement[s] of State law" -- one should logically turn to those provisions for guidance in determining the nature, scope, and purpose of § 401(d) conditions. Each of the four identified CWA provisions describes discharge-related limitations. See § 1311 (making it unlawful to discharge any pollutant except in compliance with enumerated provisions of the Act); § 1312 (establishing effluent limitations on point source discharges); [***738] § 1316 (setting national standards of performance [**1917] for the control of discharges); and § 1317 (setting pretreatment effluent standards and prohibiting the discharge of certain effluents except in compliance with standards).

The final term on the list -- "appropriate requirement[s] of State law" -- appears to be more general in scope. Because [*728] this reference follows a list of more limited provisions that specifically address discharges, however, the principle *ejusdem generis* would suggest that the general reference to "appropriate" requirements of state law is most reasonably construed to extend only to provisions that, like the other provisions in the list, impose discharge-related restrictions. Cf. *Cleveland v. United States*, 329 U.S. 14, 18, 91 L. Ed. 12, 67 S. Ct. 13 (1946) ("Under the *ejusdem generis* rule of construction the general words are confined to the class and may not be used to enlarge it"); *Arcadia v. Ohio Power Co.*, 498 U.S. 73, 84, 112 L. Ed. 2d 374, 111 S. Ct. 415 (1990). In sum, the text and structure of § 401 indicate that a State may impose under § 401(d) only those conditions that are related to discharges.

B

The Court adopts its expansive reading of § 401(d) based at least in part upon deference to the "conclusion" of the Environmental Protection Agency (EPA) that § 401(d) is not limited to requirements relating to discharges. *Ante*, at 712. The agency regulation to which the Court defers is 40 CFR § 121.2(a)(3) (1993), which provides that the certification shall contain "[a] statement that there is a reasonable assurance that the activity will be conducted in a manner which will not violate applicable water quality standards." *Ante*, at 712. According to the Court, "EPA's conclusion that *activities* -- not merely discharges -- must comply with state water quality standards . . . is entitled to deference" under *Chevron* U.S. *A. Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837, 81 L. Ed. 2d 694, 104 S. Ct. 2778 (1984). *Ante*, at 712.

As a preliminary matter, the Court appears to resort to deference under *Chevron* without establishing through an initial examination of the statute that the text of the section is ambiguous. See *Chevron, supra*, 467 U.S. at 842-843. More importantly, the Court invokes *Chevron* deference to support its interpretation even though the Government does not seek [*729] deference for the EPA's regulation in this case. [1] That the Government itself has not contended that an agency interpretation exists reconciling the scope of the conditioning authority under § 401(d) with the terms of § 401(a)(1) should suggest to the Court that there is no "agency construction" directly addressing the question. *Chevron, supra*, at 842.

1 The Government, appearing as *amicus curiae* "supporting affirmance," instead approaches the question presented by assuming, *arguendo*, that petitioners' construction of § 401 is correct: "Even if a condition imposed under Section 401(d) were valid only if it assured that a 'discharge' will comply with the State's water quality standards, the [minimum flow condition set by respondents] satisfies that test." Brief for United States as *Amicus Curiae* 11.

In fact, the regulation to which the [***739] Court defers is hardly a definitive construction of the scope of § 401(d). On the contrary, the EPA's position on the question whether conditions under § 401(d) must be related to discharges is far from clear. Indeed, the only EPA regulation that specifically addresses the "conditions" that may appear in § 401 certifications speaks exclusively in terms of limiting discharges. According to the EPA, a § 401 certification shall contain "[a] statement *of any conditions* which the certifying agency deems necessary or desirable *with respect to the discharge of the activity*." 40 CFR § 121.2(a)(4) (1993) (emphases added). In my view, § 121.2(a)(4) should, at the very least, give the Court pause before it resorts to *Chevron* deference in this case.

II

The Washington Supreme Court held that the State's water quality standards, promulgated [**1918] pursuant to § 303 of the Act, 33 U.S.C. § 1313, were "appropriate" requirements of state law under § 401(d), and sustained the stream flow condition imposed by respondents as necessary to ensure compliance with a "use" of

the river as specified in those standards. As an alternative to their argument that § 401(d) conditions must be discharge related, petitioners assert that [*730] the state court erred when it sustained the stream flow condition under the "use" component of the State's water quality standards without reference to the corresponding "water quality criteria" contained in those standards. As explained above, petitioners' argument with regard to the scope of a State's authority to impose conditions under § 401(d) is correct. I also find petitioners' alternative argument persuasive. Not only does the Court err in rejecting that § 303 argument, in the process of doing so it essentially removes all limitations on a State's conditioning authority under § 401.

The Court states that, "at a minimum, limitations imposed pursuant to state water quality standards adopted pursuant to § 303 are 'appropriate' requirements of state law" under § 401(d). *Ante*, at 713. [2] A water quality standard promulgated pursuant to § 303 must "consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses." 33 U.S.C. § 1313(c)(2)(A). The Court asserts that this language "is most naturally read to require that a project be consistent with *both* components, namely, the designated use *and* the water quality criteria." *Ante*, at 715. In the Court's view, then, the "use" of a body of water is independently enforceable through § 401(d) without reference to the corresponding criteria. *Ibid.*

> 2 In the Court's view, § 303 water quality standards come into play under § 401(d) either as "appropriate" requirements of state law or through § 301 of the Act, which, according to the Court, "incorporates § 303 by reference." *Ante*, at 713 (citations omitted). The Court notes that through § 303, "the statute allows States to impose limitations to ensure compliance with § 301 of the Act." *Ibid.* Yet § 301 makes unlawful only "the [unauthorized] *discharge* of any pollutant by any person." 33 U.S.C. § 1311(a) (emphasis added); cf. *supra*, 511 U.S. at 727. Thus, the Court's reliance on § 301 as a source of authority to impose conditions unrelated to discharges is misplaced.

[***740] The Court's reading strikes me as contrary to common sense. It is difficult to see how compliance with a "use" of a body of water could be enforced without reference to the [*731] corresponding criteria. In this case, for example, the applicable "use" is contained in the following regulation: "Characteristic uses shall include, but not be limited to, . . . salmonid migration, rearing, spawning, and harvesting." Wash. Admin. Code (WAC) 173-201-045(1)(b)(iii) (1986). The corresponding criteria, by contrast, include measurable factors such as quantities of fecal coliform organisms and dissolved gases in the water. 173-201-045(1)(c)(i) and (ii). [3] Although the Act does not further address (at least not expressly) the link between "uses" and "criteria," the regulations promulgated under § 303 make clear that a "use" is an aspirational goal to be attained through compliance with corresponding "criteria." Those regulations suggest that "uses" are to be "achieved and protected," and that "water quality criteria" are to be adopted to "protect the designated use[s]." 40 CFR §§ 131.10(a), 131.11(a)(1) (1993).

> 3 Respondents concede that petitioners' project "will likely not violate any of Washington's water quality criteria." Brief for Respondents 24.

The problematic consequences of decoupling "uses" and "criteria" become clear once the Court's interpretation of § 303 is read in the context of § 401. In the Court's view, a State may condition the § 401 certification "upon *any limitations* necessary to ensure compliance" with the "uses of the water body." *Ante*, at 713-714, 715 (emphasis added). Under the Court's interpretation, then, state environmental agencies may pursue, through § 401, their water goals in any way they choose; the conditions imposed on certifications need not relate to discharges, nor to water quality criteria, nor to any objective or quantifiable standard, so long as they tend to [**1919] make the water more suitable for the uses the State has chosen. In short, once a State is allowed to impose conditions on § 401 certifications to protect "uses" in the abstract, § 401(d) is limitless.

To illustrate, while respondents in this case focused only on the "use" of the Dosewallips River as a fish habitat, this particular river has a number of other "characteristic uses," [*732] including "recreation (primary contact recreation, sport fishing, boating, and aesthetic enjoyment)." WAC 173-201-045(1)(b)(v) (1986). Under the Court's interpretation, respondents could have imposed any number of conditions related to recreation, including conditions that have little relation to water quality. In *Town of Summersville*, 60 F.E.R.C. P61,291, p. 61,990 (1992), for instance, the state agency required the applicant to "construct . . . access roads and paths, low water stepping stone bridges, . . . a boat launching facility . . ., and a residence and storage building." These conditions presumably would be sustained under the approach the Court adopts today. [4] In the end, it is difficult to conceive of a condition that would fall outside a [***741] State's § 401(d) authority under the Court's approach.

> 4 Indeed, as the § 401 certification stated in this case, the flow levels imposed by respondents

> are "in excess of those required to maintain water quality in the bypass region," App. to Pet. for Cert. 83a, and therefore conditions not related to water quality must, in the Court's view, be permitted.

III

The Court's interpretation of § 401 significantly disrupts the careful balance between state and federal interests that Congress struck in the Federal Power Act (FPA), 16 U.S.C. § 791 *et seq.* Section 4(e) of the FPA authorizes the Federal Energy Regulatory Commission (FERC) to issue licenses for projects "necessary or convenient . . . for the development, transmission, and utilization of power across, along, from, or in any of the streams . . . over which Congress has jurisdiction." 16 U.S.C. § 797(e). In the licensing process, FERC must balance a number of considerations: "In addition to the power and development purposes for which licenses are issued, [FERC] shall give equal consideration to the purposes of energy conservation, the protection, mitigation of damage to, and enhancement of, fish and wildlife (including related spawning grounds and habitat), the protection of recreational [*733] opportunities, and the preservation of other aspects of environmental quality." *Ibid.* Section 10(a) empowers FERC to impose on a license such conditions, including minimum stream flow requirements, as it deems best suited for power development and other public uses of the waters. See 16 U.S.C. § 803(a); *California* v. *FERC*, 495 U.S. 490, 494-495, 506, 109 L. Ed. 2d 474, 110 S. Ct. 2024 (1990).

In *California* v. *FERC*, the Court emphasized FERC's exclusive authority to set the stream flow levels to be maintained by federally licensed hydroelectric projects. California, in order "to protect [a] stream's fish," had imposed flow rates on a federally licensed project that were significantly higher than the flow rates established by FERC. *Id.*, at 493. In concluding that California lacked authority to impose such flow rates, we stated:

> "As Congress directed in FPA § 10(a), FERC set the conditions of the [project] license, including the minimum stream flow, after considering which requirements would best protect wildlife and ensure that the project would be economically feasible, and thus further power development. Allowing California to impose significantly higher minimum stream flow requirements would disturb and conflict with the balance embodied in that considered federal agency determination. FERC has indicated that the California requirements interfere with its comprehensive planning authority, and we agree that allowing California to impose the challenged requirements would be contrary to congressional intent regarding the Commission's licensing authority and would constitute a veto of the project that was approved and licensed by [**1920] FERC." *Id.*, 495 U.S. at 506-507 (citations and internal quotation marks omitted).

California v. *FERC* reaffirmed our decision in *First Iowa Hydro-Electric Cooperative* v. *FPC*, 328 U.S. 152, 164, 90 L. Ed. 1143, 66 S. Ct. 906 (1946), in which we warned against "vesting in [state authorities] [*734] a veto power" over federal hydroelectric projects. Such authority, we concluded, could "destroy the effectiveness" of the FPA and "subordinate to the control of the State the 'comprehensive' [***742] planning" with which the administering federal agency (at that time the Federal Power Commission) was charged. *Ibid.*

Today, the Court gives the States precisely the veto power over hydroelectric projects that we determined in *California* v. *FERC* and *First Iowa* they did not possess. As the language of § 401(d) expressly states, any condition placed in a § 401 certification, including, in the Court's view, a stream flow requirement, "*shall* become a condition on any Federal license or permit." 33 U.S.C. § 1341(d) (emphasis added). Any condition imposed by a State under § 401(d) thus becomes a "term . . . of the license as a matter of law," *Department of Interior* v. *FERC*, 293 U.S. App. D.C. 182, 952 F.2d 538, 548 (CADC 1992) (citation and internal quotation marks omitted), regardless of whether FERC favors the limitation. Because of § 401(d)'s mandatory language, federal courts have uniformly held that FERC has no power to alter or review § 401 conditions, and that the proper forum for review of those conditions is state court. [5] Section 401(d) conditions imposed by States are [*735] therefore binding on FERC. Under the Court's interpretation, then, it appears that the mistake of the State in *California* v. *FERC* was not that it had trespassed into territory exclusively reserved to FERC; rather, it simply had not hit upon the proper device -- that is, the § 401 certification -- through which to achieve its objectives.

> 5 See, *e. g.*, *Keating* v. *FERC*, 288 U.S. App. D.C. 344, 927 F.2d 616, 622 (CADC 1991) (federal review inappropriate because a decision to grant or deny § 401 certification "presumably turns on questions of substantive state environmental law -- an area that Congress expressly intended to reserve to the states and concerning which federal agencies have little competence");

Department of Interior v. *FERC*, 952 F.2d at 548; *United States* v. *Marathon Development Corp.*, 867 F.2d 96, 102 (CA1 1989); *Proffitt* v. *Rohm & Haas*, 850 F.2d 1007, 1009 (CA3 1988). FERC has taken a similar position. See *Town of Summersville*, 60 F.E.R.C. P61,291, p. 61,990 (1992) ("Since pursuant to Section 401(d) . . . all of the conditions in the water quality certification must become conditions in the license, review of the appropriateness of the conditions is within the purview of state courts and not the Commission. The only alternatives available to the Commission are either to issue a license with the conditions included or to deny" the application altogether); accord, *Central Maine Power Co.*, 52 F.E.R.C. P61,033, pp. 61,172-61,173 (1990).

Although the Court notes in passing that "the limitations included in the certification become a condition on any federal license," *ante*, at 708, it does not acknowledge or discuss the shift of power from FERC to the States that is accomplished by its decision. Indeed, the Court merely notes that "any conflict with FERC's authority under the FPA" in this case is "hypothetical" at this stage, *ante*, at 723, because "FERC has not yet acted on petitioners' license application," *ante*, at 722. We are assured that "it is quite possible . . . that any FERC license would contain the same conditions as the state § 401 certification." *Ibid.*

The Court's observations simply miss the point. Even if FERC might have no objection to the stream flow condition established by respondents *in this case*, such a happy coincidence will likely prove to be the exception, rather than the rule. In issuing licenses, FERC must balance the *Nation's* power needs together with the need for energy conservation, [***743] irrigation, flood control, fish and wildlife protection, and recreation. 16 U.S.C. § 797(e). State environmental agencies, by contrast, need only consider parochial environmental interests. Cf., *e. g.*, Wash. Rev. Code § 90.54.010(2) (1992) (goal of State's water policy is to "insure that waters of the state are protected and fully utilized for the greatest benefit to the people of the state of Washington"). As a result, it is likely that conflicts will arise between a [**1921] FERC-established stream flow level and a state-imposed level.

Moreover, the Court ignores the fact that its decision nullifies the congressionally mandated process for resolving such state-federal disputes when they develop. Section 10(j)(1) of the FPA, 16 U.S.C. § 803(j)(1), which was added as part [*736] of the Electric Consumers Protection Act of 1986 (ECPA), 100 Stat. 1244, provides that every FERC license must include conditions to "protect, mitigate damage to, and enhance" fish and wildlife, including "related spawning grounds and habitat," and that such conditions "shall be based on recommendations" received from various agencies, including state fish and wildlife agencies. If FERC believes that a recommendation from a state agency is inconsistent with the FPA -- that is, inconsistent with what FERC views as the proper balance between the Nation's power needs and environmental concerns -- it must "attempt to resolve any such inconsistency, giving due weight to the recommendations, expertise, and statutory responsibilities" of the state agency. § 803(j)(2). If, after such an attempt, FERC "does not adopt in whole or in part a recommendation of any [state] agency," it must publish its reasons for rejecting that recommendation. *Ibid.* After today's decision, these procedures are a dead letter with regard to stream flow levels, because a State's "recommendation" concerning stream flow "shall" be included in the license when it is imposed as a condition under § 401(d).

More fundamentally, the 1986 amendments to the FPA simply make no sense in the stream flow context if, in fact, the States already possessed the authority to establish minimum stream flow levels under § 401(d) of the CWA, which was enacted years before those amendments. Through the ECPA, Congress strengthened the role of the States in establishing FERC conditions, but it did not make that authority paramount. Indeed, although Congress could have vested in the States the final authority to set stream flow conditions, it instead left that authority with FERC. See *California* v. *FERC*, 495 U.S. at 499. As the Ninth Circuit observed in the course of rejecting California's effort to give *California* v. *FERC* a narrow reading, "there would be no point in Congress requiring [FERC] to consider the state agency recommendations on environmental matters and [*737] make its own decisions about which to accept, if the state agencies had the power to impose the requirements themselves." *Sayles Hydro Associates* v. *Maughan*, 985 F.2d 451, 456 (1993).

Given the connection between § 401 and federal hydroelectric licensing, it is remarkable that the Court does not at least attempt to fit its interpretation of § 401 into the larger statutory framework governing the licensing process. At the very least, the significant impact the [***744] Court's ruling is likely to have on that process should compel the Court to undertake a closer examination of § 401 to ensure that the result it reaches was mandated by Congress.

IV

Because the Court today fundamentally alters the federal-state balance Congress carefully crafted in the FPA, and because such a result is neither mandated nor supported by the text of § 401, I respectfully dissent.

REFERENCES

To Full Text Opinion

61A Am Jur 2d, Pollution Control 133, 142, 144, 151, 158; 78 Am Jur 2d, Waters 292

11 Federal Procedure, L Ed, Environmental Protection 32:262; 24 Federal Procedure, L Ed, Natural and Marine Resources 56:313, 56:315

9 Federal Procedural Forms, L Ed, Environmental Protection 29:91

20 Am Jur Pl & Pr Forms (Rev), Pollution Control, Form 81

33 USCS 1341

L Ed Digest, Energy 30; Environmental Law 32, 40; Waters 20

L Ed Index, Hydroelectric Power; Water Pollution

ALR Index, Federal Water Pollution Control Act; Hydroelectric Power; Water Pollution

Annotation References:

Supreme Court's views as to construction and application of Federal Water Pollution Control (Clean Water) Act (33 USCS 1251-1376). 84 L Ed 2d 895.

TAB "5"

LEXSEE

Caution
As of: Jun 17, 2010

CITY OF ARCADIA et al., Plaintiffs and Appellants, v. STATE WATER RESOURCES CONTROL BOARD et al., Defendants and Appellants.

D043877

COURT OF APPEAL OF CALIFORNIA, FOURTH APPELLATE DISTRICT, DIVISION ONE

135 Cal. App. 4th 1392; 38 Cal. Rptr. 3d 373; 2006 Cal. App. LEXIS 92; 2006 Cal. Daily Op. Service 797; 2006 Daily Journal DAR 1145; 36 ELR 20025

January 26, 2006, Filed

SUBSEQUENT HISTORY: Rehearing denied by City of Arcadia v. State Water Resources Control Board, 2006 Cal. App. LEXIS 221 (Cal. App. 4th Dist., Feb. 17, 2006)
Review denied by City of Arcadia v. State Water Res. Control Bd., 2006 Cal. LEXIS 4781 (Cal., Apr. 19, 2006)

PRIOR HISTORY: [***1] Superior Court of San Diego County, No. GIC803631, Wayne L. Peterson and Linda B. Quinn, Judges.
City of Arcadia v. United States EPA, 265 F. Supp. 2d 1142, 2003 U.S. Dist. LEXIS 9044 (N.D. Cal., 2003)

CASE SUMMARY:

PROCEDURAL POSTURE: Plaintiff cities alleged that defendants, regional and state water quality boards, violated the Clean Water Act, 33 U.S.C. § 1251 et seq., or the Porter-Cologne Act, Wat. Code, § 13000 et seq., by enacting a basin plan with the levels of permissible pollution, or total maximum daily loads (TMDLs), set at zero. The Superior Court of San Diego County (California) partially granted the cities' petition for writ of mandate. Both parties appealed.

OVERVIEW: The cities agreed that litter discharged from storm drains into a river had to be remedied but opposed the target of zero as unattainable and inordinately expensive. The court found that the regional board's environmental checklist was deficient and that there was sufficient evidence of a fair argument that the project might have a significant effect on the environment, thus necessitating an environmental impact report or its functional equivalent under the California Environmental Quality Act (CEQA). The trial court erred by granting declaratory relief on the cities' claim that the Trash TMDL did not apply to "nonwaters" and by substituting its own judgment for that of the boards on the issue of whether the adoption of the Trash TMDL should have been preceded by a scientific study of the assimilative capacity of the channel. The Trash TMDL sufficiently notified affected parties of its inclusion in the state's 1998 303(d) list as an impaired water body. The court rejected the cities' claim that the trial court should have invalidated the Trash TMDL on the additional ground that the boards failed to provide for deemed compliance with the target of zero trash through certain methods.

OUTCOME: The judgment was affirmed as to the Trash TMDL's violation of CEQA and as to the cities' appeal. The judgment was reversed insofar as it was based on the Trash TMDL's lack of an assimilative capacity study, inclusion on the impaired water body list, and a cost/benefit analysis or the consideration of economic factors, and also insofar as it granted declaratory relief regarding the purported inclusion of non-navigable waters in the Trash TMDL.

CORE TERMS: trash, environmental, pollution, water board', regional boards, epa, water quality, load, nonpoint, river, Clean Water Act, pollutant, basin, zero,

maximum, monitoring, target, impaired, checklist, watershed, storm, state board, point sources, significant effect, beneficial uses, negative declarations, mitigation measures, regulatory programs, assimilative, numeric

LexisNexis(R) Headnotes

Environmental Law > Water Quality > Clean Water Act > Water Quality Standards

[HN1]The Clean Water Act places primary reliance for developing water quality standards on the states. It requires each state to develop such standards and review them at least once every three years for required modifications, pursuant to 33 U.S.C. § 1313(a), (c)(1). The standards must include designated uses such as recreation, navigation or the propagation of fish, shellfish and wildlife; water quality criteria sufficient to protect the designated uses, and an anti-degradation policy, pursuant to 40 C.F.R. §§ 131.6, 131.10-131.12 (2003). The water quality criteria can be expressed in narrative form or in a numeric form, e.g., specific pollutant concentrations. Narrative criteria are broad statements of desirable water quality goals in a water quality plan. For example, "no toxic pollutants in toxic amounts" would be a narrative description. The Clean Water Act focuses on two possible sources of pollution: point sources and nonpoint sources. "Point source" means any discernable, confined and discrete conveyance such as a pipe, ditch, channel, tunnel, or conduit, as provided in 33 U.S.C. § 1362(14). The Clean Water Act does not define nonpoint source pollution, but it has been described as nothing more than a water pollution problem not involving a discharge from a point source.

Environmental Law > Water Quality > Clean Water Act > Coverage & Definitions > Point Sources
Environmental Law > Water Quality > Clean Water Act > Nonpoint Source Pollution

[HN2]Congress has dealt with the problem of point source pollution using the National Pollution Discharge Elimination System (NPDES) permit process. Under this approach, compliance rests on technology-based controls that limit the discharge of pollution from any point source into certain waters unless that discharge complies with the Clean Water Act's specific requirements, pursuant to 33 U.S.C. § 1311(b)(1)(A). Nonpoint sources, because of their very nature, are not regulated under the NPDES program. Instead, Congress addressed nonpoint sources of pollution in a separate portion of the Clean Water Act which encourages states to develop areawide waste treatment management plans.

Environmental Law > Water Quality > Clean Water Act > Coverage & Definitions > Discharges
Environmental Law > Water Quality > Clean Water Act > Water Quality Standards

[HN3]When the National Pollution Discharge Elimination System (NPDES) system fails to adequately clean up certain rivers, streams or smaller water segments, the Clean Water Act requires use of a water-quality based approach. States are required to identify such waters and rank them in order of priority, and based on that ranking, calculate levels of permissible pollution called total maximum daily loads (TMDLs) under 33 U.S.C. § 1313(d)(1)(A) and 40 C.F.R. § 130.7(b) (2003). This list of substandard waters is known as the 303(d) list (§ 303 of the Clean Water Act having been codified as 33 U.S.C. § 1313). A TMDL defines the specified maximum amount of a pollutant which can be discharged or "loaded" into the waters at issue from all combined sources. A TMDL must be established at a level necessary to implement the applicable water quality standards. A TMDL assigns a waste load allocation to each point source, which is that portion of the TMDL's total pollutant load, which is allocated to a point source for which an NPDES permit is required. Once a TMDL is developed, effluent limitations in NPDES permits must be consistent with the waste load allocations in the TMDL. Under 33 U.S.C. § 1313(d)(1)(C), a TMDL requires a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality.

Environmental Law > Federal & State Interrelationships > General Overview
Environmental Law > Water Quality > Clean Water Act > Discharge Permits > General Overview

[HN4]The Environmental Protection Agency may allow states to adopt and administer National Pollution Discharge Elimination System permit programs, and it has authorized California to administer such a program.

Environmental Law > Water Quality > Clean Water Act > Water Quality Standards

[HN5]California implements the Clean Water Act through the Porter-Cologne Act, Wat. Code, § 13000 et seq. Under the Porter-Cologne Act, nine regional water quality control boards regulate the quality of waters within their regions under the purview of the State Water Resources Control Board, pursuant to Wat. Code, §§ 13000, 13100, 13200, 13241, 13242. In accordance with Wat. Code, §§ 13050, subd. (j), 13240, regional boards must formulate and adopt water quality control plans, commonly called basin plans, which designate the bene-

ficial uses to be protected, water quality objectives and a program to meet the objectives. "Water quality objectives" means the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area, as provided in Wat. Code, § 13050, subd. (h). The Environmental Protection Agency (EPA) must approve or disapprove a state's total maximum daily load (TMDL) within 30 days of its submission, pursuant to 33 U.S.C. § 1313(d)(2). If the EPA disapproves a state's submission, it must establish its own TMDL within 30 days of the disapproval.

Administrative Law > Judicial Review > Remedies > Mandamus

[HN6]Code Civ. Proc., § 1094.5, the administrative mandamus statute, applies when the writ is issued for the purpose of inquiring into the validity of any final administrative order or decision made as the result of a proceeding in which by law a hearing is required to be given, evidence is required to be taken, and discretion in the determination of facts is vested in the inferior tribunal, pursuant to § 1094.5, subd. (a). Acts of an administrative agency that are quasi-legislative in nature, e.g., establishment of regulations to carry out a statutory policy or direction, are not reviewable by administrative mandamus. Rather, review of a quasi-legislative action is limited to traditional mandamus.

Civil Procedure > Appeals > Standards of Review > General Overview
Civil Procedure > Appeals > Standards of Review > De Novo Review
Civil Procedure > Appeals > Standards of Review > Substantial Evidence > General Overview
Evidence > Procedural Considerations > Burdens of Proof > General Overview

[HN7]Under Code Civ. Proc., § 1085, review is limited to an inquiry into whether the action was arbitrary, capricious or entirely lacking in evidentiary support, and the petitioner has the burden of proof to show that the decision is unreasonable or invalid as a matter of law. An appellate court reviews the record de novo except where the trial court made foundational factual findings, which are binding on appeal if supported by substantial evidence.

Environmental Law > Litigation & Administrative Proceedings > Judicial Review

[HN8]As to California Environmental Quality Act issues, an abuse of discretion standard applies. Abuse of discretion is established if an agency has not proceeded in a manner required by law or if the determination or decision is not supported by substantial evidence, pursuant to Pub. Resources Code, § 21168.5. A reviewing court's task on appeal is the same as the trial court's. Thus, the court conducts its review independent of the trial court's findings.

Administrative Law > Judicial Review > Standards of Review > Statutory Interpretation

[HN9]Generally, considerable weight should be accorded to an executive department's construction of a statutory scheme it is entrusted to administer.

Environmental Law > Water Quality > Clean Water Act > Water Quality Standards

[HN10]A regional water quality control board is authorized to investigate the quality of waters in its region, pursuant to Wat. Code, § 13267, subd. (a), and when it requires a polluter to furnish technical or monitoring program reports, the burden, including costs, of these reports shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports, pursuant to § 13267, subd. (b)(1).

Governments > Legislation > Interpretation

[HN11]A reviewing court's primary aim in construing any law is to determine the legislative intent. In doing so the court looks first to the words of the statute, giving them their usual and ordinary meaning.

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > General Overview

[HN12]A total maximum daily load (TMDL) does not, by itself, prohibit any conduct or require any actions. Instead, each TMDL represents a goal that may be implemented by adjusting pollutant discharge requirements in individual National Pollution Discharge Elimination System permits or establishing nonpoint source controls. A TMDL forms the basis for further administrative actions that may require or prohibit conduct with respect to particularized pollutant discharges and water bodies.

Environmental Law > Water Quality > Clean Water Act > Water Quality Standards

[HN13]Wat. Code, § 13241, provides that each regional water quality control board shall establish such water quality objectives in water quality control plans as in its judgment will ensure the reasonable protection of beneficial uses and the prevention of nuisance. In establishing water quality objectives a regional board is required to

consider several factors, including economic considerations, pursuant to § 13241, subd. (d). Section 13241, subd. (d), does not define "economic considerations" or specify a particular manner of compliance. Thus, the matter is within a regional board's discretion.

Environmental Law > Water Quality > Clean Water Act > Water Quality Standards

[HN14]The Clean Water Act provides that each state shall identify those waters within its boundaries for which the effluent limitations are not stringent enough to implement any water quality standards applicable to such waters. The State shall establish a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of such waters under 33 U.S.C. § 1313(d)(1)(A). Further, it provides in § 1313(d)(1)(C) that each state shall establish for the waters identified in § 1313(d)(1)(A), and in accordance with the priority ranking, the total maximum daily load (TMDL). These provisions do not prohibit a regional water quality control board from identifying a water body and establishing a TMDL for it at essentially the same time, or indicate that formal designation on a state's 303(d) list is a prerequisite to a TMDL. Further, § 1313(d)(2) provides that each state shall submit to the Environmental Protection Agency (EPA) Administrator from time to time, for his or her approval the waters identified and the loads established under § 1313(d)(1)(A) and (1)(C). The EPA Administrator shall either approve or disapprove such identification and load not later than 30 days after the date of submission. This clarifies that a regional board may simultaneously identify an impaired water body and establish a TMDL for it.

Environmental Law > Federal & State Interrelationships > General Overview

Environmental Law > Water Quality > Clean Water Act > Water Quality Standards

[HN15]States remain at the front line in combating pollution, and so long as the State does not attempt to adopt more lenient pollution control measures than those already in place under the Clean Water Act, it does not prohibit state action.

Environmental Law > National Environmental Policy Act > Environmental Assessments

[HN16]The California Environmental Quality Act (CEQA) compels the government first to identify the environmental effects of projects, and then to mitigate those adverse effects through the imposition of feasible mitigation measures or through the selection of feasible alternatives. CEQA mandates that public agencies refrain from approving projects with significant environmental effects if there are feasible alternatives or mitigation measures that can substantially lessen or avoid those effects.

Environmental Law > National Environmental Policy Act > Environmental Impact Statements

[HN17]The California Environmental Quality Act (CEQA) is implemented through initial studies, negative declarations, and environmental impact reports (EIR). CEQA requires a governmental agency to prepare an EIR whenever it considers approval of a proposed project that may have a significant effect on the environment. If there is no substantial evidence a project may have a significant effect on the environment or the initial study identifies potential significant effects, but provides for mitigation revisions which make such effects insignificant, a public agency must adopt a negative declaration to such effect and, as a result, no EIR is required. CEQA requires the preparation of an EIR whenever it can be fairly argued on the basis of substantial evidence that the project may have significant environmental impact. Thus, if substantial evidence in the record supports a fair argument that significant impacts or effects may occur, an EIR is required and a negative declaration cannot be certified.

Environmental Law > National Environmental Policy Act > Environmental Impact Statements

[HN18]"Significant effect on the environment," for purposes of the California Environmental Quality Act requirement for preparation of an environmental impact report, means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant, pursuant to Cal. Code Regs., tit. 14, § 15382.

Environmental Law > National Environmental Policy Act > General Overview

[HN19]State regulatory programs that meet certain environmental standards and are certified by the Secretary of the California Resources Agency are exempt from the California Environmental Quality Act's (CEQA) requirements for preparation of environmental impact reports, negative declarations, and initial studies. Environmental review documents prepared by certified pro-

grams may be used instead of environmental documents that CEQA would otherwise require. Certified regulatory programs remain subject, however, to other CEQA requirements, pursuant to Pub. Resources Code, § 21080.5. Documents prepared by certified programs are considered the functional equivalent of documents CEQA would otherwise require. An agency seeking certification must adopt regulations requiring that final action on the proposed activity include written responses to significant environmental points raised during the decisionmaking process. The agency must also implement guidelines for evaluating the proposed activity consistently with the environmental protection purposes of the regulatory program. The document generated pursuant to the agency's regulatory program must include alternatives to the proposed project and mitigation measures to minimize significant adverse environmental effects, and be made available for review by other public agencies and the public.

Environmental Law > National Environmental Policy Act > General Overview

[HN20]The guidelines for implementation of the California Environmental Quality Act (CEQA), Cal. Code Regs., tit. 14, § 15000 et seq., do not directly apply to a certified regulatory program's environmental document. However, when conducting its environmental review and preparing its documentation, a certified regulatory program is subject to the broad policy goals and substantive standards of CEQA. In a certified program, an environmental document used as a substitute for an environmental impact report must include alternatives to the activity and mitigation measures to avoid or reduce any significant or potentially significant effects that the project might have on the environment, and a document used as a substitute negative declaration must include a statement that the agency's review of the project would not have any significant or potentially significant effects on the environment and therefore no alternatives or mitigation measures are proposed to avoid or reduce any significant effects on the environment. This statement shall be supported by a checklist or other documentation to show the possible effects that the agency examined in reaching this conclusion, pursuant to Cal. Code Regs., tit. 14, § 15252, subd. (a).

Environmental Law > National Environmental Policy Act > Environmental Impact Statements

[HN21]A regional water quality control board's submission of a plan for State Water Resources Control Board approval must be accompanied by a brief description of the proposed activity, a completed environmental checklist prescribed by the state board, and a written report addressing reasonable alternatives to the proposed activity and mitigation measures to minimize any significant adverse environmental impacts, pursuant to Cal. Code Regs., tit. 23, § 3777, subd. (a).

Environmental Law > National Environmental Policy Act > Environmental Impact Statements

[HN22]"Tiering" refers to the coverage of general matters in broader environmental impact reports (EIRs) (such as on general plans or policy statements) with subsequent narrower EIRs or ultimately site-specific EIRs incorporating by reference the general discussions and concentrating solely on the issues specific to the EIR subsequently prepared. Tiering is appropriate when the sequence of EIRs is from a general plan, policy, or program EIR to a site-specific EIR. Courts have allowed first tier EIR's to defer detailed analysis to subsequent project EIR's.

Environmental Law > National Environmental Policy Act > Environmental Assessments

[HN23]Pub. Resources Code, § 21159, which allows expedited environmental review for mandated projects, provides that an agency shall perform, at the time of the adoption of a rule or regulation requiring the installation of pollution control equipment, or a performance standard or treatment requirement, an environmental analysis of the reasonably foreseeable methods of compliance. The environmental analysis shall, at a minimum, include, all of the following: (1) an analysis of the reasonably foreseeable environmental impacts of the methods of compliance; (2) an analysis of reasonably foreseeable mitigation measures; and (3) an analysis of reasonably foreseeable alternative means of compliance with the rule or regulation, pursuant to § 21159, subd. (a).

Civil Procedure > Appeals > Reviewability > Preservation for Review

[HN24]Issues not presented to the trial court are ordinarily waived on appeal.

Environmental Law > National Environmental Policy Act > Environmental Impact Statements

[HN25]Because a negative declaration ends environmental review, the fair argument test provides a low threshold for requiring an environmental impact report.

Environmental Law > National Environmental Policy Act > Environmental Assessments

[HN26]Substantial evidence is not argument, speculation, unsubstantiated opinion or narrative or evidence which is clearly inaccurate or erroneous under Pub. Resources Code, § 21082.2 , subd. (c). However, letters and testimony from government officials with personal knowledge of the anticipated effects of a project on their communities supports a fair argument that the project may have a significant environmental impact.

Civil Procedure > Justiciability > Case or Controversy Requirements > Actual Disputes
Civil Procedure > Declaratory Judgment Actions > General Overview
[HN27]The fundamental basis of declaratory relief is the existence of an actual, present controversy.

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > Storm Water Discharges
[HN28]33 U.S.C. § 1342(p)(3)(B)(iii), provides that a National Pollution Discharge Elimination System (NPDES) permit for a municipal discharge into a storm drain shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Environmental Protection Act Administrator or the State determines appropriate for the control of such pollutants. Best management practices are generally pollution control measures set forth in NPDES permits.

Environmental Law > Water Quality > Clean Water Act > Water Quality Standards
[HN29]The statute applicable to establishing a total maximum daily load (TMDL), 33 U.S.C. § 1313(d)(1)(C), does not suggest that practicality is a consideration. To the contrary, a regional water quality control board is required to establish a TMDL at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety, pursuant to § 1313(d)(1)(C).

Civil Procedure > Appeals > Briefs
[HN30]Parties are required to include argument and citation to authority in their briefs, and the absence of these necessary elements allows an appellate court to treat an appellant's issue as waived.

Environmental Law > Water Quality > Clean Water Act > Water Quality Standards
[HN31]33 U.S.C. § 1342(p)(3)(B)(iii) does not divest a regional water quality control board's discretion to impose a National Pollution Discharge Elimination System permit condition requiring compliance with state water quality standards more stringent than the maximum extent practicable standard.

Environmental Law > Water Quality > Clean Water Act > Water Quality Standards
[HN32]When the Environmental Protection Agency makes a total maximum daily load or permitting decision, it will make each decision on a case-by-case basis and will be guided by applicable requirements of the Clean Water Act and implementing regulations, taking into account comments and information presented at that time by interested persons regarding the appropriateness of applying these recommendations to the particular situation.

Environmental Law > Water Quality > Clean Water Act > Coverage & Definitions > Point Sources
Environmental Law > Water Quality > Clean Water Act > Nonpoint Source Pollution
Environmental Law > Water Quality > Clean Water Act > Water Quality Standards
[HN33]Although the Clean Water Act focuses on both point and nonpoint sources of pollution, the measure does not require states to take regulatory action to limit the amount of non-point water pollution introduced into its waterways. While the Clean Water Act requires states to designate water standards and identify bodies of water that fail to meet these standards, nothing in the Clean Water Act demands that a state adopt a regulatory system for nonpoint sources.

Environmental Law > Water Quality > Clean Water Act > Water Quality Standards
[HN34]Section 303(d)(1)(A) of the Clean Water Act, 33 U.S.C. § 1313(d)(1)(A), provides that in identifying impaired waters for its 303(d) list, states shall establish a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of such waters. Wat. Code, § 13241, subd. (a), requires regional water quality control boards to establish water quality objectives in water quality control plans by considering a variety of factors, including past, present, and probable future beneficial uses of water.

Environmental Law > Water Quality > Clean Water Act > Water Quality Standards
[HN35]See 33 U.S.C. § 1313(d)(1)(C).

Administrative Law > Agency Rulemaking > General Overview
Administrative Law > Agency Rulemaking > Notice Requirements
Environmental Law > Water Quality > Clean Water Act > Water Quality Standards
[HN36]The California Administrative Procedures Act (APA), Gov. Code, §§ 11340 et seq. and 11370, establishes the procedures by which state agencies may adopt regulations. The agency must give the public notice of its proposed regulatory action; issue a complete text of the proposed regulation with a statement of the reasons for it; give interested parties an opportunity to comment on the proposed regulation; respond in writing to public comments; and forward a file of all materials on which the agency relied in the regulatory process to the Office of Administrative Law, which reviews the regulation for consistency with the law, clarity, and necessity. One purpose of the APA is to ensure that those persons or entities whom a regulation will affect have a voice in its creation, as well as notice of the law's requirements so that they can conform their conduct accordingly. The APA does not apply to the adoption or revision of state policy for water quality control unless the agency adopts a policy, plan, or guideline, or any revision thereof, pursuant to Gov. Code, § 11353, subds. (a), (b)(1).

SUMMARY:

CALIFORNIA OFFICIAL REPORTS SUMMARY

Regional and state water quality boards sought to ameliorate the problem of litter discharged from municipal storm drains into a river through the adoption and approval of a planning document. Several cities alleged that the boards violated the Clean Water Act (33 U.S.C. § 1251 et seq.), or the Porter-Cologne Act (Wat. Code, § 13000 et seq.), by setting the levels of permissible pollution, known as total maximum daily loads (TMDL's), at zero. The cities agreed that trash pollution had to be remedied but opposed the target of zero as unattainable and inordinately expensive. The trial court partially granted the cities' petition for writ of mandate. (Superior Court of San Diego County, No. GIC803631, Wayne L. Peterson and Linda B. Quinn, Judges.)

The Court of Appeal affirmed as to the trial court's judgment that the TMDL violated the California Environmental Quality Act (CEQA) and as to the cities' appeal. However, the court reversed the judgment insofar as it was based on the TMDL's lack of an assimilative capacity study, inclusion on the impaired water body list, and consideration of economic factors, and also insofar as it granted declaratory relief regarding the purported inclusion of nonnavigable waters in the TMDL. The court found that the regional board's environmental checklist was deficient and that there was sufficient evidence of a fair argument that the project might have a significant effect on the environment, thus necessitating an environmental impact report or its functional equivalent under CEQA. The trial erred by substituting its own judgment for that of the boards on the issue of whether the adoption of the TMDL should have been preceded by a scientific study of the assimilative capacity of the river. Federal law did not require the regional board to conduct an assimilative capacity study before adopting the TMDL. By its plain terms, Wat. Code, § 13267, is inapplicable at the TMDL stage, and thus the trial court erred by invalidating the TMDL on that ground. The TMDL sufficiently notified affected parties of its inclusion in the state's 1998 "303(d) list" of substandard waters as an impaired water body. The court rejected the cities' claim that the trial court erred by not invalidating the TMDL on the additional ground that the boards [*1393] failed to provide for deemed compliance with the target through certain methods. (Opinion by McConnell, P. J., with McIntyre and Irion, JJ., concurring.)

HEADNOTES

CALIFORNIA OFFICIAL REPORTS HEADNOTES
Classified to California Digest of Official Reports

(1) Pollution and Conservation Laws § 5--Clean Water Act--Effect on States.--The federal Clean Water Act places primary reliance for developing water quality standards on the states. It requires each state to develop such standards and review them at least once every three years for required modifications, pursuant to 33 U.S.C. § 1313(a), (c)(1). The standards must include designated uses such as recreation, navigation or the propagation of fish, shellfish and wildlife; water quality criteria sufficient to protect the designated uses; and an antidegradation policy, pursuant to 40 C.F.R. §§ 131.6, 131.10-131.12 (2003). The water quality criteria can be expressed in narrative form or in a numeric form, e.g., specific pollutant concentrations. Narrative criteria are broad statements of desirable water quality goals in a water quality plan. For example, "no toxic pollutants in toxic amounts" would be a narrative description. The Clean Water Act focuses on two possible sources of pollution: point sources and nonpoint sources. "Point source" means any discernable, confined and discrete conveyance such as a pipe, ditch, channel, tunnel, or conduit, as provided in 33 U.S.C. § 1362(14). The Clean Water Act does not define nonpoint source pollution, but it has been described as nothing more than a water pollution problem not involving a discharge from a point source.

(2) Pollution and Conservation Laws § 5--Water--National Discharge Elimination System Permits--Total Maximum Daily Loads.--Congress has dealt with the problem of point source pollution using the National Pollution Discharge Elimination System (NPDES) permit process. Under this approach, compliance rests on technology-based controls that limit the discharge of pollution from any point source into certain waters unless that discharge complies with the Clean Water Act's specific requirements. Nonpoint sources, because of their very nature, are not regulated under the NPDES program. [*1394] Instead, Congress has addressed nonpoint sources of pollution in a separate portion of the Clean Water Act which encourages states to develop areawide waste treatment management plans. When the NPDES system fails to adequately clean up certain rivers, streams, or smaller water segments, the Clean Water Act requires use of a water-quality-based approach. States are required to identify such waters and rank them in order of priority, and based on that ranking, calculate levels of permissible pollution called total maximum daily loads (TMDL's). This list of substandard waters is known as the 303(d) list (§ 303 of the Clean Water Act having been codified as 33 U.S.C. § 1313). A TMDL defines the specified maximum amount of a pollutant which can be discharged or "loaded" into the waters at issue from all combined sources. A TMDL must be established at a level necessary to implement the applicable water quality standards. A TMDL assigns a waste load allocation to each point source, which is that portion of the TMDL's total pollutant load, which is allocated to a point source for which an NPDES permit is required. Once a TMDL is developed, effluent limitations in NPDES permits must be consistent with the waste load allocations in the TMDL. Under 33 U.S.C. § 1313(d)(1)(C), a TMDL requires a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality. The Environmental Protection Agency may allow states to adopt and administer NPDES permit programs, and it has authorized California to administer such a program.

(3) Pollution and Conservation Laws § 5--Water--Porter-Cologne Act--Regional Quality Control Boards and Plans.--California implements the Clean Water Act through the Porter-Cologne Act (Wat. Code, § 13000 et seq.). Under the Porter-Cologne Act, nine regional water quality control boards regulate the quality of waters within their regions under the purview of the State Water Resources Control Board, pursuant to Wat. Code, §§ 13000, 13100, 13200, 13241, 13242. In accordance with Wat. Code, §§ 13050, subd. (j), 13240, regional boards must formulate and adopt water quality control plans, commonly called basin plans, which [*1395] designate the beneficial uses to be protected, water quality objectives and a program to meet the objectives. "Water quality objectives" means the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area, as provided in Wat. Code, § 13050, subd. (h). The Environmental Protection Agency (EPA) must approve or disapprove a state's total maximum daily load (TMDL) within 30 days of its submission, pursuant to 33 U.S.C. § 1313(d)(2). If the EPA disapproves a state's submission, it must establish its own TMDL within 30 days of the disapproval.

(4) Administrative Law § 95--Judicial Review and Relief--Methods--Mandamus--Quasi-legislative Acts.--Code Civ. Proc., § 1094.5, the administrative mandamus statute, applies when the writ is issued for the purpose of inquiring into the validity of any final administrative order or decision made as the result of a proceeding in which by law a hearing is required to be given, evidence is required to be taken, and discretion in the determination of facts is vested in the inferior tribunal, pursuant to § 1094.5, subd. (a). Acts of an administrative agency that are quasi-legislative in nature, e.g., establishment of regulations to carry out a statutory policy or direction, are not reviewable by administrative mandamus. Rather, review of a quasi-legislative action is limited to traditional mandamus.

(5) Mandamus § 74--Rehearing and Appeal--Review; Scope--Petitioner's Burden of Proof.--Under Code Civ. Proc., § 1085, review of an administrative action is limited to an inquiry into whether the action was arbitrary, capricious or entirely lacking in evidentiary support, and the petitioner has the burden of proof to show that the decision is unreasonable or invalid as a matter of law. An appellate court reviews the record de novo except where the trial court made foundational factual findings, which are binding on appeal if supported by substantial evidence. [*1396]

(6) Administrative Law § 10--Powers and Functions of Agencies--Deference to Construction of Laws.--Generally, considerable weight should be accorded to an executive department's construction of a statutory scheme it is entrusted to administer.

(7) Statutes § 21--Construction--Legislative Intent--Examination of Language.--A court's primary aim in construing any law is to determine the legislative intent. In doing so the court looks first to the words of the statute, giving them their usual and ordinary meaning.

(8) Pollution and Conservation Laws § 5--Water--Total Maximum Daily Load and Pollutant Discharge Requirements.--A total maximum daily load (TMDL) does not, by itself, prohibit any conduct or require any actions. Instead, each TMDL represents a goal that may be implemented by adjusting pollutant discharge requirements in individual National Pollution Discharge Elimination System permits or establishing nonpoint source controls. A TMDL forms the basis for further administrative actions that may require or prohibit conduct with respect to particularized pollutant discharges and water bodies.

(9) Pollution and Conservation Laws § 5--Water--Environmental Checklist Requirement--Regional Quality Control Board's Basin Plan to Incorporate Trash in Total Maximum Daily Load.--In an action challenging a regional water quality control board's basin plan, which set the levels of permissible pollution for a flood control channel, the trial court correctly concluded that an environmental impact report or its functional equivalent was necessary because the regional water board's environmental checklist and total maximum daily load were deficient and there was sufficient evidence of a fair argument that the project might have a significant effect on the environment.

[8 Witkin, Cal. Procedure (4th ed. 1997) Extraordinary Writs, § 268; 12 Witkin, Summary of Cal. Law (10th ed. 2005) Real Property, §§ 833, 893, 896; 5 Witkin, Cal. Procedure (4th ed. 1997) Pleading, § 817.]

(10) Pollution and Conservation Laws § 2.1--California Environmental Quality Act--Impact Reports--Necessity of Preparing; Requirements.--The California Environmental Quality Act (CEQA) compels the government first to identify the environmental effects of projects, and then to mitigate those adverse effects through the imposition of feasible mitigation measures or through the selection of feasible alternatives. CEQA mandates that public agencies refrain from approving projects with significant environmental effects if there are feasible alternatives or [*1397] mitigation measures that can substantially lessen or avoid those effects. CEQA is implemented through initial studies, negative declarations, and environmental impact reports (EIR's). CEQA requires a governmental agency to prepare an EIR whenever it considers approval of a proposed project that may have a significant effect on the environment. If there is no substantial evidence a project may have a significant effect on the environment or the initial study identifies potential significant effects, but provides for mitigation revisions which make such effects insignificant, a public agency must adopt a negative declaration to such effect and, as a result, no EIR is required. CEQA requires the preparation of an EIR whenever it can be fairly argued on the basis of substantial evidence that the project may have significant environmental impact. Thus, if substantial evidence in the record supports a fair argument that significant impacts or effects may occur, an EIR is required and a negative declaration cannot be certified. "Significant effect on the environment" means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant, pursuant to Cal. Code Regs., tit. 14, § 15382.

(11) Pollution and Conservation Laws § 2.1--California Environmental Quality Act--Impact Reports--Necessity of Preparing; Exemptions.--State regulatory programs that meet certain environmental standards and are certified by the Secretary of the California Resources Agency are exempt from the California Environmental Quality Act's (CEQA) requirements for preparation of environmental impact reports, negative declarations, and initial studies. Environmental review documents prepared by certified programs may be used instead of environmental documents that CEQA would otherwise require. Certified regulatory programs remain subject, however, to other CEQA requirements. Documents prepared by certified programs are considered the functional equivalent of documents CEQA would otherwise require. An agency seeking [*1398] certification must adopt regulations requiring that final action on the proposed activity include written responses to significant environmental points raised during the decisionmaking process. The agency must also implement guidelines for evaluating the proposed activity consistently with the environmental protection purposes of the regulatory program. The document generated pursuant to the agency's regulatory program must include alternatives to the proposed project and mitigation measures to minimize significant adverse environmental effects, and be made available for review by other public agencies and the public.

(12) Pollution and Conservation Laws § 2.1--California Environmental Quality Act--Impact Reports--Necessity of Preparing; Application to Certified Regulatory Program.--The guidelines for implementation of the California Environmental Quality Act (CEQA), Cal. Code Regs., tit. 14, § 15000 et seq., do not directly apply to a certified regulatory program's environmental document. However, when conducting its en-

vironmental review and preparing its documentation, a certified regulatory program is subject to the broad policy goals and substantive standards of CEQA. In a certified program, an environmental document used as a substitute for an environmental impact report must include alternatives to the activity and mitigation measures to avoid or reduce any significant or potentially significant effects that the project might have on the environment, and a document used as a substitute negative declaration must include a statement that the agency's review of the project would not have any significant or potentially significant effects on the environment and therefore no alternatives or mitigation measures are proposed to avoid or reduce any significant effects on the environment. This statement shall be supported by a checklist or other documentation to show the possible effects that the agency examined in reaching this conclusion, pursuant to Cal. Code Regs., tit. 14, § 15252, subd. (a)(2)(A), (B). A regional water quality control board's submission of a plan for State Water Resources Control Board approval must be accompanied by a brief description of the proposed activity, a completed environmental checklist prescribed by the state board, and a written report addressing reasonable alternatives to the proposed activity and mitigation measures to minimize any significant adverse environmental impacts, pursuant to Cal. Code Regs., tit. 23, § 3777, subd. (a).

(13) Pollution and Conservation Laws § 1--California Environmental Quality Act--Expedited Review for Mandated Projects--Analysis of Reasonably Foreseeable Impacts.--Pub. Resources Code, § 21159, which allows expedited environmental review for mandated projects, provides that an agency shall perform, at the time of the adoption of a [*1399] rule or regulation requiring the installation of pollution control equipment, or a performance standard or treatment requirement, an environmental analysis of the reasonably foreseeable methods of compliance. The environmental analysis shall, at a minimum, include all of the following: (1) an analysis of the reasonably foreseeable environmental impacts of the methods of compliance; (2) an analysis of reasonably foreseeable mitigation measures; and (3) an analysis of reasonably foreseeable alternative means of compliance with the rule or regulation, pursuant to § 21159, subd. (a). Substantial evidence is not argument, speculation, unsubstantiated opinion or narrative, or evidence which is clearly inaccurate or erroneous, as stated in Pub. Resources Code, § 21082.2, subd. (c). However, letters and testimony from government officials with personal knowledge of the anticipated effects of a project on their communities supports a fair argument that the project may have a significant environmental impact.

(14) Declaratory Relief § 7--Actual Controversy; Fundamental Basis of Relief.--The fundamental basis of declaratory relief is the existence of an actual, present controversy.

(15) Pollution and Conservation Laws § 5--Water--National Discharge Elimination System Permit for Municipal Discharge into Storm Drain.--33 U.S.C. § 1342(p)(3)(B)(iii), provides that a National Pollution Discharge Elimination System (NPDES) permit for a municipal discharge into a storm drain shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Environmental Protection Act Administrator or the state determines appropriate for the control of such pollutants. Best management practices are generally pollution control measures set forth in NPDES permits.

(16) Pollution and Conservation Laws § 5--Water--Regional Quality Control Board and Establishment of Total Maximum Daily Load.--The statute applicable to establishing a total maximum daily load (TMDL), 33 U.S.C. § 1313(d)(1)(C), does not suggest that practicality is a consideration. To the contrary the statute requires a regional water quality control board to establish a TMDL at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety. [*1400]

(17) Appellate Review § 109--Briefs--Form and Requisites--Argument and Authority--Waiver.--Parties are required to include argument and citation to authority in their briefs, and the absence of these necessary elements allows an appellate court to treat an appellant's issue as waived.

(18) Pollution and Conservation Laws § 5--Water--Requirements for Total Maximum Daily Load or Permitting Decisions.--When the Environmental Protection Agency makes a total maximum daily load or permitting decision, it will make each decision on a case-by-case basis and will be guided by applicable requirements of the Clean Water Act and implementing regulations, taking into account comments and information presented at that time by interested persons regarding the appropriateness of applying these recommendations to the particular situation.

(19) Pollution and Conservation Laws § 5--Water--Clean Water Act and Effect on States.--Although the Clean Water Act focuses on both point and nonpoint sources of pollution, the measure does not require states to take regulatory action to limit

the amount of nonpoint water pollution introduced into its waterways. While the Clean Water Act requires states to designate water standards and identify bodies of water that fail to meet these standards, nothing in the Clean Water Act demands that a state adopt a regulatory system for nonpoint sources.

(20) Administrative Law § 19--Actions--Legislation or Rulemaking--Practice and Procedure.--The California Administrative Procedure Act (APA) (Gov. Code, §§ 11340 et seq., 11370), establishes the procedures by which state agencies may adopt regulations. The agency must give the public notice of its proposed regulatory action; issue a complete text of the proposed regulation with a statement of the reasons for it; give interested parties an opportunity to comment on the proposed regulation; respond in writing to public comments; and forward a file of all materials on which the agency relied in the regulatory process to the Office of Administrative Law, which reviews the regulation for consistency with the law, clarity, and necessity. One purpose of the APA is to ensure that those persons or entities whom a regulation will affect have a voice in its creation, as well as notice of the law's requirements so that they can conform their conduct accordingly. The APA does not apply to the adoption or revision of state policy for water quality control unless the agency adopts a policy, plan, or guideline, or any revision thereof, pursuant to Gov. Code, § 11353, subds. (a), (b)(1). [*1401]

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JUDGES: McConnell, P. J., with McIntyre and Irion, JJ., concurring.

OPINION BY: McConnell

OPINION

[**378] **McCONNELL, P. J.**--This case concerns the serious environmental problem of litter discharged from municipal storm drains into the Los Angeles River, and efforts of the California Regional Water Quality Control Board, Los Angeles Region (Regional Board) and the State Water Resources Control Board (State Board) [1] to ameliorate the problem through the adoption and approval of a planning document setting a target of zero trash discharge within a multi-year implementation period.

1 We refer to these entities together as the Water Boards.

The Water Boards appeal a judgment partially granting a petition for writ of mandate brought by the City of Arcadia and 21 other cities (Cities), [2] who [*1402] agree trash pollution must be remedied but oppose the target of zero trash as unattainable and inordinately expensive. The Water Boards challenge [***3] the court's findings that an assimilative capacity study is a required element of its action; a cost-benefit analysis and consideration of economic factors are required under state law and are not met; the zero trash target is inapplicable to the Los Angeles River Estuary (Estuary) because it does not appear on the state's list of impaired waters; and, the Water Boards failed to comply with the California Environmental Quality Act (CEQA) by not preparing an environmental impact report (EIR) or its functional equivalent.

2 In addition to Arcadia the Cities include Baldwin Park, Bellflower, Cerritos, Commerce, Diamond Bar, Downey, Irwindale, Lawndale, Monrovia, Montebello, Monterey Park, Pico Rivera, Rosemead, San Gabriel, Santa Fe Springs, Sierra Madre, Signal Hill, South Pasadena, Vernon, West Covina and Whittier.

The Water Boards also contend the court erred by granting the Cities declaratory relief on their claim the trash total maximum daily load (TMDL) does not apply to "nonwaters," meaning areas that do [***4] not drain into navigable waters such as the Los Angeles River or tributaries, as the parties agreed during this proceeding that the trash TMDL applies only to navigable waters.

The Cities also appeal, contending the trial court erred by not invalidating the trash TMDL on the additional grounds the Water Boards failed to provide for deemed compliance with the target of zero trash through certain methods; failed to implement load allocations for nonpoint sources of trash pollution; failed to adhere to the data collection and analysis required by federal and state law; relied on nonexistent, illegal and irrational uses to be made of the Los Angeles River; and, violated the Administrative Procedures Act (APA).

We conclude the Cities' appeal lacks merit. As to the Water Boards' appeal, we conclude the court properly invalidated the planning document on the ground of noncompliance with CEQA, and we affirm the judgment insofar as it is based on that ground. We reverse the judgment to the extent it is based on other grounds. Further, we hold the court erred by granting declaratory relief on the nonwaters issue as there was no controversy when the court ruled.

[**379] BACKGROUND INFORMATION

I

[***5] *Statutory and Regulatory Scheme*

The "quality of our nation's waters is governed by a 'complex statutory and regulatory scheme ... that implicates both federal and state administrative responsibilities.' " (*City of Burbank v. State Water Resources Control Bd.* [*1403] (2005) 35 Cal.4th 613, 619 [26 Cal. Rptr. 3d 304, 108 P.3d 862] (*City of Burbank*).) An overview of applicable law is required to place the facts here in context.

A

Federal Law

In 1972 Congress enacted amendments to the Federal Water Pollution Control Act (Pub.L. No. 92-500 (Oct. 18, 1972) 86 Stat. 816; 33 U.S.C. § 1251 et seq.), which, as amended in 1977, is commonly known as the Clean Water Act. (*City of Burbank, supra,* 35 Cal.4th at pp. 619-620.) Its stated goal is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters" by eliminating the discharge of pollutants into navigable waters. (33 U.S.C. § 1251(a).)

(1) [HN1]The Clean Water Act places "primary reliance for developing water quality standards on the states." (*Scott v. Hammond* (7th Cir. 1984) 741 F.2d 992, 994.) It requires each state to develop such standards [***6] and review them at least once every three years for required modifications. (33 U.S.C. § 1313(a), (c)(1).) The standards must include designated uses such as recreation, navigation or the propagation of fish, shellfish and wildlife; water quality criteria sufficient to protect the designated uses; and an antidegradation policy. (40 C.F.R. §§ 131.6, 131.10-131.12 (2003).) The water quality criteria "can be expressed in narrative form or in a numeric form, e.g., specific pollutant concentrations." (*Florida Public Interest Research Group v. E.P.A.* (11th Cir. 2004) 386 F.3d 1070, 1073.) "Narrative criteria are broad statements of desirable water quality goals in a water quality plan. For example, 'no toxic pollutants in toxic amounts' would be a narrative description." (*City of Burbank, supra,* 35 Cal.4th at p. 622, fn. 4.)

The Clean Water Act focuses on two possible sources of pollution: point sources and nonpoint sources. "Point source" means "any discernable, confined and discrete conveyance" such as a pipe, ditch, channel, tunnel, or [***7] conduit. (33 U.S.C. § 1362(14).) The Clean Water Act does not define nonpoint source pollution, but it has been described as " ' "nothing more [than] a [water] pollution problem not involving a discharge from a point source." ' " (*Defenders of Wildlife v. U.S. Environ. Protec.* (10th Cir. 2005) 415 F.3d 1121, 1124.) [3]

3 According to the Environmental Protection Act (EPA), nonpoint source pollution is caused by rainfall or snowmelt moving over and through the ground, and includes excess fertilizers, herbicides, and insecticides from agricultural lands and residential areas; oil, grease and toxic chemicals from urban runoff and energy production; sediment from improperly managed construction sites, crop and forest land, and eroding stream banks; salt from irrigation practices and acid drainage from abandoned mines; and bacteria and nutrients from livestock, pet wastes and faulty septic systems. (<http://www.epa.gov/owow/nps/qa.html> [as of Jan. 26, 2006].)

[*1404] [HN2](2) "Congress dealt with the problem of point source [***8] pollution using the National Pollution Discharge Elimination System [NPDES] permit process. Under this approach, compliance rests on technology- [**380] based controls that limit the discharge of pollution from any point source into certain waters unless that discharge complies with the [Clean Water] Act's specific requirements." (*San Francisco BayKeeper v. Whitman* (2002) 297 F.3d 877, 880; see 33 U.S.C. § 1311(b)(1)(A).) " 'Nonpoint sources, because of their very nature, are not regulated under the NPDES [program]. Instead, Congress addressed nonpoint sources of pollution in a separate portion of the [Clean Water] Act which encourages states to develop areawide waste treatment management plans.' " (*Pronsolino v. Marcus*

(N.D.Cal. 2000) 91 F. Supp. 2d 1337, 1348, citing 33 U.S.C. § 1288; see also 33 U.S.C. § 1329.)

[HN3]"When the NPDES system fails to adequately clean up certain rivers, streams or smaller water segments, the [Clean Water] Act requires use of a water-quality based approach. States are required to identify such waters ... [and] rank [them] in order of priority, and [***9] based on that ranking, calculate levels of permissible pollution called 'total maximum daily loads' or 'TMDLs.' " (*San Francisco BayKeeper v. Whitman, supra,* 297 F.3d at p. 880; see 33 U.S.C. § 1313(d)(1)(A); 40 C.F.R. § 130.7(b) (2003).) "This list of substandard waters is known as the '303(d) list' (section 303 of the Clean Water Act having been codified as [title 33 United States Code] section 1313)." (*City of Arcadia v. U.S. Environmental* (9th Cir. 2005) 411 F.3d 1103, 1105 (*City of Arcadia II*).)

"A TMDL defines the specified maximum amount of a pollutant which can be discharged or 'loaded' into the waters at issue from all combined sources." (*Dioxin/Organochlorine Center v. Clarke* (9th Cir. 1995) 57 F.3d 1517, 1520.) "A TMDL must be 'established at a level necessary to implement the applicable water quality standards ... .' [Citation.] A TMDL assigns a *waste load allocation* ... to each point source, which is that portion of the TMDL's total pollutant load, which is allocated to a point source for which an NPDES permit is required. [Citation.] Once a TMDL is developed, effluent limitations [***10] in NPDES permits must be consistent with the [waste load allocations] in the TMDL." (*Communities for a Better Environment v. State Water Resources Control Bd.* (2003) 109 Cal.App.4th 1089, 1095-1096 [1 Cal. Rptr. 3d 76]; see *Dioxin/Organochlorine Center v. Clarke*, at p. 1520.) [4] A TMDL requires a [*1405] "margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality." (33 U.S.C. § 1313(d)(1)(C).)

> 4 The Clean Water Act "does not define total maximum daily load. EPA's regulations break it into a 'waste[]load allocation' for point sources and a 'load allocation' for nonpoint sources." (*Pronsolino v. Marcus, supra,* 91 F. Supp. 2d at p. 1344, fn. 8; see 40 C.F.R. § 130.2(g)-(i) (2005).)

[HN4]The EPA may allow states to adopt and administer NPDES permit programs (*Pronsolino v. Marcus, supra,* 91 F. Supp. 2d at p. 1347, fn. 10), and it has authorized California to administer [***11] such a program. (54 Fed.Reg. 40664 (Oct. 3, 1989).)

B

State Law

[HN5](3) California implements the Clean Water Act through the Porter-Cologne Act (Wat. Code, § 13000 et seq.), which was promulgated in 1969. Under the Porter-Cologne Act, nine regional boards regulate the quality of waters within their regions under the purview of the State Board. (Wat. Code, §§ 13000, 13100, 13200, 13241, 13242.)

[**381] Regional boards must formulate and adopt water quality control plans, commonly called basin plans, which designate the beneficial uses to be protected, water quality objectives and a program to meet the objectives. (Wat. Code, §§ 13050, subd. (j), 13240.) " 'Water quality objectives' means the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area." (*Id.*, § 13050, subd. (h).)

The EPA must approve or disapprove a state's TMDL within 30 days of its submission. [***12] (33 U.S.C. § 1313(d)(2).) If the EPA disapproves a state's submission, it must establish its own TMDL within 30 days of the disapproval. (*Ibid.*)

II

Trash TMDL

The Los Angeles River is a 51-mile flood control channel, largely concrete-lined, which runs through the City of Los Angeles and surrounding municipalities in Los Angeles County and terminates at the Pacific Ocean. In 1990 the Regional Board issued an NPDES storm water permit to the Los Angeles County Department of Public Works as the principal permittee and 84 cities as copermittees, to address various chemical pollutants discharged into the region's water bodies (Municipal NPDES Permit).

[*1406] In 1994 the Regional Board adopted a revised water quality control plan, or basin plan (1994 Basin Plan), which includes narrative water quality objectives. It provides that "[w]aters shall not contain floating materials, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses," and "[w]aters shall not contain suspended or settleable material in concentrations that cause nuisance or adversely affect beneficial uses." (Italics [***13] omitted.) Beneficial uses of the Los Angeles River and surrounds include wildlife and marine habitat, including habitat for endangered species, and recreational activities such as fishing, walking, hiking, jogging, bicycling, horseback riding, bird watching and photography.

In 1996 and 1998 the Regional Board identified certain reaches of the Los Angeles River on the state's "303(d) list" as being impaired by trash, primarily through storm water runoff in thousands of municipal storm drains. [5] On September 19, 2001, the Regional Board adopted a resolution to amend its 1994 Basin Plan to incorporate a TMDL for trash in the Los Angeles River (Trash TMDL). Despite many objections from affected municipalities, the Trash TMDL sets a numeric target of zero trash as "even a single piece of trash can be detrimental, and no level of trash is acceptable in waters of the state." [6] "The numeric target is staff's interpretation of the narrative water quality objective [in [**382] the 1994 Basin Plan], including an implicit margin of safety."

5 The Regional Board defines "trash" as "man-made litter" within the meaning of Government Code section 68055.1, subdivision (g), which provides: " 'Litter' means all improperly discarded waste material, including, but not limited to, convenience food, beverage, and other produce packages or containers constructed of steel, aluminum, glass, paper, plastic, and other natural and synthetic materials, thrown or deposited on the lands and waters of the state, but not including the properly discarded waste of the primary processing of agriculture, mining, logging, sawmilling, or manufacturing."

[***14]

6 The Regional Board adopted a Trash TMDL in January 2001, which also had a target of zero trash. It reconsidered the matter on September 19, 2001, "to provide clarifying language and greater flexibility in implementing the [Trash] TMDL."

The reduction of trash is to be phased over a 14-year period, including an optional two-year baseline monitoring period. In lieu of baseline monitoring, cities may accept a default baseline allocation of "640 gallons of uncompressed trash per square mile per year," a value based on data the City of Calabasas provided. The Trash TMDL provides for a "review of the current target [of zero trash] ... once a reduction of 50% has been achieved and sustained," "based on the findings of future studies regarding the threshold levels needed for protecting beneficial uses."

Under the Trash TMDL, cities may use a variety of compliance methods, including "[e]nd-of-pipe full capture structural controls," "partial capture [*1407] control systems" and "[i]nstitutional controls." Cities using a full-capture system meeting certain criteria will be deemed in compliance with [***15] the zero target if the systems are properly maintained and maintenance records are available for the Regional Board's inspection.

On December 21, 2001, the Regional Board issued an order under Water Code section 13267 to the County of Los Angeles and copermittees under the Municipal NPDES Permit to submit baseline monitoring plans by February 1, 2002, and to monitor trash in the Los Angeles River between January 2002 and December 2003, with a final report due February 2004. [7] The Regional Board intends to use resulting data to "refine" the default baseline waste load allocations in the Trash TMDL.

7 In *City of Arcadia v. U.S. Environ. Protection Agency* (N.D.Cal. 2003) 265 F. Supp. 2d 1142, 1156 (*City of Arcadia I*), the court noted the Los Angeles County Department of Public Works has assumed responsibility for the baseline monitoring burden for all municipalities to which the Trash TMDL applies. The Trash TMDL states that "[e]ach of the permittees and copermittees are responsible for monitoring land uses within their jurisdiction," but "monitoring responsibilities may be delegated to a third-party monitoring entity such as the [Department of Public Works]."

[***16] In February and July 2002, the State Board and the Office of Administrative Law, respectively, approved the Trash TMDL. In August 2002 the EPA approved it and announced it supersedes an interim TMDL for trash the EPA adopted in March 2002 as a result of a consent decree in litigation between environmental groups and the EPA. (*City of Arcadia I, supra*, 265 F. Supp. 2d 1142, 1147.) [8]

8 In *City of Arcadia I, supra*, 265 F. Supp. 2d at page 1153, the City of Arcadia and other cities unsuccessfully challenged the EPA's approval of the Trash TMDL on the ground it was unauthorized to do so after adopting its own TMDL. In *City of Arcadia II, supra*, 411 F.3d at pages 1106-1107, the court affirmed the lower court's dismissal of the case.

III

Procedural History

The Cities are within the Regional Board's jurisdiction and are permittees under the 2001 Municipal NPDES Permit. In July 2002 the Cities filed a petition for writ of mandate and complaint for declaratory [***17] and injunctive relief against the Water Boards. They filed the action in the Los Angeles County Superior Court, but the parties stipulated to its transfer to the San Diego County Superior Court.

The second amended petition alleges numerous grounds on which the Trash TMDL violates the Clean

Water Act or the Porter-Cologne Act, and the court adjudicated some issues in favor of each party. It found the [*1408] Water Boards improperly (1) failed to conduct an analysis of the Los Angeles River's assimilative capacity; (2) failed to conduct a cost-benefit analysis or [**383] consider economic factors under Water Code sections 13267 and 13241; (3) purported to apply the Trash TMDL to the Estuary even though it is not listed on the state's 1998 303(d) list as impaired; and (4) failed to prepare a required EIR or its functional equivalent under CEQA. The court issued a writ of mandate commanding the Water Boards to set aside the amendment to the 1994 Basin Plan and the Trash TMDL to the extent it was based on the above findings and to not take any further steps to implement it. The court denied the Water Boards' motion to vacate the judgment or grant [***18] a new trial, and judgment was entered on December 24, 2003.

The Cities later moved for an order that the prohibitory terms of the writ of mandate and judgment not be stayed on appeal. (Code Civ. Proc., § 1110b.) The court granted the motion, and further ordered that "to preserve the status quo and prevent injustice to [the Cities], the ... implementation schedule and compliance dates, and all milestones contained in the [Trash TMDL] shall be tolled effective December 24, 2003, through and until a final determination has been rendered on the pending appeal." The Water Boards appealed that order, and in accordance with the parties' stipulation we consolidated it with the other appeals.

DISCUSSION

WATER BOARDS' APPEAL

I

Standard of Review

(4) The Water Boards contend a deferential standard of review applies to our review of their action under Code of Civil Procedure section 1085, and the Cities claim an independent standard applies under Code of Civil Procedure section 1094.5. [HN6]Code of Civil Procedure section 1094.5, the administrative mandamus [***19] statute, applies when "the writ is issued for the purpose of inquiring into the validity of any final administrative order or decision made as the result of a proceeding in which by law a hearing is required to be given, evidence is required to be taken, and discretion in the determination of facts is vested in the inferior tribunal." (Code Civ. Proc., § 1094.5, subd. (a).) "Acts of an administrative agency that are quasi-legislative in nature, e.g., establishment of regulations to carry out a statutory policy or direction, are not reviewable by administrative mandamus." (8 Witkin, Cal. Procedure (4th ed. 1997) Extraordinary Writs, § 268, pp. 1067-1068.) Rather, review of a quasi-legislative action is limited to traditional mandamus. (*Id.* at p. 1068.)

[*1409] **(5)** The trial court correctly found this proceeding is for traditional mandamus because the Regional Board's adoption and the State Water Board's approval of the Trash TMDL was quasi-legislative. [HN7]Under Code of Civil Procedure section 1085, " ' "review is limited to an inquiry into whether the action was arbitrary, capricious or entirely lacking [***20] in evidentiary support, ..." ' ... [and] [t]he petitioner has the burden of proof to show that the decision is unreasonable or invalid as a matter of law. [Citation.] We review the record de novo except where the trial court made foundational factual findings, which are binding on appeal if supported by substantial evidence." (*Citizens for Improved Sorrento Access, Inc. v. City of San Diego* (2004) 118 Cal.App.4th 808, 814 [13 Cal. Rptr. 3d 259], citations omitted.)

The Cities' reliance on Water Code section 13330 is misplaced. It provides that "[a]ny party aggrieved by a final decision or order of a regional board *for which the state board denies review* may obtain review of the decision or order of the regional [**384] board in the superior court" (*id.*, § 13330, subd. (b), italics added), and "[e]xcept as otherwise provided herein, Section 1094.5 of the Code of Civil Procedure shall govern proceedings for which petitions are filed pursuant to this section" (*id.*, § 13330, subd. (d)). Given the language italicized *ante*, Water Code section 13330 necessarily applies to an administrative appeal of a quasi-judicial action [***21] under Code of Civil Procedure section 1094.5. Here, an appeal to the State Board was unnecessary because the Trash TMDL was ineffective without its approval. (Wat. Code, § 13245.) Indeed, the State Board notified the Cities in March 2001 that it "lacks statutory authority to accept petitions for review of water quality control plan (basin plan) amendments adopted" by regional boards.

[HN8]As to CEQA issues, the parties agree an abuse of discretion standard applies. (*Federation of Hillside & Canyon Assns. v. City of Los Angeles* (2004) 126 Cal.App.4th 1180, 1199 [24 Cal. Rptr. 3d 543].) Abuse of discretion "is established if the agency has not proceeded in a manner required by law or if the determination or decision is not supported by substantial evidence." (Pub. Resources Code, § 21168.5.) "Our task on appeal is 'the same as the trial court's.' [Citation.] Thus, we conduct our review independent of the trial court's findings." (*Quail Botanical Gardens Foundation, Inc. v. City of Encinitas* (1994) 29 Cal.App.4th 1597, 1602, fn. 3 [35 Cal. Rptr. 2d 470].)

II

Assimilative Capacity Study

The trial court [***22] invalidated the Trash TMDL based in part on the Cities' argument an "assimilative capacity study" is a required element of a TMDL and none was performed here. In its statement of decision, the court [*1410] explained "[i]t is unreasonable to conclude that the beneficial uses of the [Los Angeles] River could not be maintained with some 'target' other than zero. Of course, it is possible the River would not support a greater target, however, without a study it is yet undetermined."

The Water Boards contend the trial court erred by substituting its own judgment for that of the Water Boards on the issue of whether the adoption of the Trash TMDL should have been preceded by a scientific study of the assimilative capacity of the Los Angeles River. They assert the matter was best suited for their determination rather than the court's and the evidence adequately supports their decision. We agree with the Water Boards.

During the notice and comment period, the Regional Board received numerous complaints that a zero Trash TMDL is infeasible, or at least unwarranted without a scientific assimilative capacity study, or load capacity study, showing a zero limit is the only means of protecting beneficial [***23] uses. For instance, the City of Los Angeles worried that "[i]f there's one gum wrapper in the [Los Angeles] River, you can get sued."

The Regional Board responded to one complaint as follows: "For more typical pollutants, the loading parameters are flow and pollutant concentration. For this pollutant [trash], flow does not serve to dilute the pollutant, but merely serves as a transport mechanism. Therefore, the typical loading calculation does not apply to trash." The Regional Board took the position that since littering is unlawful, a target of zero trash in the Los Angeles River is the only defensible position. It also explained that its staff "found no study to document that there is an acceptable level of trash that will cause no harm to aquatic life," and absent such a study it was compelled to adopt a zero target.

[**385] At a Regional Board hearing, Dr. Mark Gold, executive director of Heal the Bay, testified he was unaware of any assimilative capacity study having been performed anywhere on trash. He explained, "Basically it's a physical object. It's trash. It's not something that breaks down and becomes part of the environment in many, many cases. And so honestly, it probably [***24] won't reach any sort of threshold of being a scientific study of any value."

At a State Board hearing Dave Smith, an EPA team leader working with the Regional Board on the trash issue, testified "it would be difficult to design [an assimilative capacity] study and come up with firm answers." He also explained that both the Regional Board and the State Board "have conducted pretty diligent efforts to find research studies, reports, that look at the affects of trash on the aquatic environment," and neither they nor the EPA could find any literature to support a target of more than zero trash.

[*1411] Alex Helperin, of the Natural Resources Defense Council, testified at a Regional Board hearing that "[e]ven small quantities [of trash] can maim and kill wildlife, [which] becomes entangled in it or ingest[s] it. [Trash] [c]an obstruct and repel boaters and contract recreators and compromise the aesthetic quality that's essential to the recognized aspect of non-contact recreation beneficial use for the Los Angeles River."

The administrative record includes numerous photographs of copious amounts of trash deposited in the Los Angeles River watershed through storm water drains. Dennis [***25] Dickerson, the executive officer of the Regional Board, testified he took photographs of trash in the Long Beach area shortly after storms, and among them are photographs of "water birds foraging among the trash." One photograph is of a bird with a cigarette butt in its mouth and another is of a fish trapped in a plastic six-ring can holder.

In arguing an assimilative capacity study is required *before* adopting a TMDL, the Cities rely principally on an EPA document issued January 7, 2000, entitled "Guidance for Developing TMDLs in California" (2000 EPA Guidance). It states: "The TMDL document must describe the relationship between numeric target(s) and identified pollutant sources, and estimate total assimilative capacity (loading capacity) of the water[]body for the pollutant of concern ... . [¶] The loading capacity is the critical quantitative link between the applicable water quality standards (as interpreted through numeric targets) and the TMDL. Thus, a maximum allowable pollutant load must be estimated to address the site-specific nature of the impairment. ... [¶] The loading capacity section must discuss the methods and data used to estimate loading capacity. [***26] A range of methods can be used ... ." (Boldface omitted.)

The 2000 EPA Guidance, however, contains the following disclaimer: "[I]t does not impose legally-binding requirements on the EPA, the State of California, or the regulated community, and may not apply to a particular situation based upon the circumstances. EPA and State decision makers retain the discretion to adopt approaches on a case-by-case basis that differ from this guidance where appropriate and consistent with the requirements of section 303(d) [of the Clean Water Act] and EPA's regulations."

(6) Smith, of the EPA, testified at a Regional Board hearing that he wrote the 2000 EPA Guidance and the Trash TMDL "fully complies with the Clean Water Act, its regulations and [the 2000 EPA Guidance]." Smith explained the "TMDL process specifically contemplates making decisions under uncertainty," and "[i]t does so by providing that a margin of safety has to be [**386] incorporated in every TMDL to account for the uncertainty in the analysis." Smith said states are required "to move forward to make TMDL decisions [*1412] based on available information and data, not to wait again and again and again for better information to come forward." [***27] [HN9]Generally, " 'considerable weight should be accorded to an executive department's construction of a statutory scheme it is entrusted to administer.' " (*United States v. Mead Corp.* (2001) 533 U.S. 218, 227-228 [150 L. Ed. 2d 292, 121 S. Ct. 2164].)

In *Natural Resources Defense Council v. Muszynski* (2d Cir. 2001) 268 F.3d 91 (*Muszynski*), the plaintiff asked the court to invalidate a TMDL that the EPA had approved to control phosphorus pollution in drinking water, on the ground a margin of safety of only 10 percent was insufficient to account for uncertainty regarding the effects of phosphorus on water quality. The plaintiff argued "that no scientific or mathematical basis prescribed this percentage as opposed to any other." (*Id.* at p. 102.) The EPA countered that "because 'there is no "standard" or guideline for choosing a specific margin of safety, best professional judgment and the available information are used in setting [it].' " (*Ibid.*) The *Muszynski* court agreed with the EPA, explaining: "While the [margin of safety] may ... be set with an uncomfortable degree of discretion, requiring that EPA [or authorized regional board] show a rigorous [***28] scientific methodology *dictates one course of action as opposed to another and would effectively prevent the agency from acting in situations where action is required in the face of a clear public health or environmental danger but the magnitude of that danger cannot be effectively quantified.* '[A]s long as Congress delegates power to an agency to regulate on the borders of the unknown, courts cannot interfere with reasonable interpretations of equivocal evidence.' [Citation.] ... [S]imply to reject EPA's efforts to implement the [Clean Water Act] because it must respond to real water quality problems without the guidance of a rigorously precise methodology would essentially nullify the exercise of agency discretion in the form of 'best professional judgment.' " (*Muszynski, supra*, 268 F.3d at pp. 102-103, italics added.)

Further, in *Muszynski, supra*, 268 F.3d 91, 103, the court noted "that approval of the Phase I [margin of safety] was based, in part, on the limited information available. The EPA approval contemplates revision of the [margin of safety] as more information becomes available: 'As additional reservoir data and loading [***29] data become available, Phase I model assumptions are being reexamined under Phase II.' "

We conclude federal law does not require the Regional Board to conduct an assimilative capacity study before adopting the Trash TMDL. Moreover, the evidence amply shows that because of the nature of trash, including Styrofoam containers and other materials that are undiluted by water, in contrast to chemical pollutants, and the dangers to wildlife of even small amounts of trash, an assimilative capacity study would be difficult to conduct and of little value at the outset. For instance, given the ill effects of trash in a [*1413] water body it is unlikely such a study would determine the Los Angeles River may be loaded with a certain percentage of trash without affecting beneficial uses, particularly since a TMDL must include a margin of safety that "takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality." (33 U.S.C. § 1313(d)(1)(C).) In any event, the Trash TMDL requires the Regional Board to reconsider the zero trash target after a 50 percent reduction of trash is achieved, and no party suggests a trash reduction of [***30] at least 50 percent is unwarranted or unattainable. Because of [**387] this escape hatch, compliance with a zero trash target may never actually be mandated. The Water Boards' decision not to conduct or require an assimilative capacity study is within their expertise, not the court's, and we defer to them on the issue.

III

Cost-Benefit Analysis and Economic Considerations

The Water Boards next contend the court erred by finding the Trash TMDL is invalid because they violated state law by not conducting a cost-benefit analysis (Wat. Code, § 13267) or considering economic factors (*id.* at § 13241) before adopting and approving it.

A

Water Code Section 13267

[HN10]A regional board is authorized to investigate the quality of waters in its region (Wat. Code, § 13267, subd. (a)), and when it requires a polluter to furnish "technical or monitoring program reports," the "burden, including costs, of these reports shall bear a reasonable relationship to the need for the report[s] and the benefits to be obtained from the reports." (Wat. Code, § 13267, subd. (b)(1).) The court [***31] found the Regional Board adopted the Trash TMDL under the authority of Water Code section 13267, as the document mentions the statute several times and "expressly requires monitoring

plans and submission of data to establish baselines for trash discharges."

The Water Boards persuasively contend Water Code section 13267 is inapplicable, and references to that statute in the Trash TMDL are to contemplated future orders. For instance, the Trash TMDL states "[b]aseline monitoring will be required via [Water Code] Section 13267," and the submission of baseline monitoring plans will be due ?30 days after receipt of the Executive Officer's request as authorized by [Water Code] Section 13267." [*1414] It also states that "future storm water permits will be modified to incorporate the Waste Load Allocations and to address monitoring and implementation of this [Trash] TMDL."

Further, the Trash TMDL states "the permittee [under the Municipal NPDES permit] will submit a monitoring plan with the proposed monitoring sites and at least two alternative monitoring locations for each site. The plan must [***32] include maps of the drainage and storm drain data for each proposed and alternate monitoring location. The monitoring plan(s) will be submitted to the Regional Board within 30 days after receipt of the Executive Officer's letter requesting such a plan. Such a request is authorized pursuant to [Water Code] [s]ection 13267. ... The Regional Board's Executive Officer will have full authority to review the monitoring plan(s), to modify the plan, to select among the alternate monitoring sites, and to approve or disapprove the plan(s)."

Additionally, the Water Boards submit that the December 21, 2001 order the Regional Board issued under Water Code section 13267 to the County of Los Angeles and copermittees under the Municipal NPDES permit regarding baseline monitoring and reporting would have been "useless and unnecessary" had the Trash TMDL itself required monitoring and reporting, and since there was no appeal of the December 21 order to the State Board within 30 days (Wat. Code, § 13320, subd. (a)) the cost-benefit analysis issue is not subject to appellate review. We note that the December 21 order, but not the Trash TMDL, warns [***33] that under Water Code section 13268 the "failure to conduct the required monitoring and/or to provide the required information in a timely manner [**388] may result in civil liability imposed by the Regional Board in an amount not to exceed ... $ 1000."

(7) [HN11]"Our primary aim in construing any law is to determine the legislative intent. [Citation.] In doing so we look first to the words of the statute, giving them their usual and ordinary meaning." (*Committee of Seven Thousand v. Superior Court* (1988) 45 Cal.3d 491, 501 [247 Cal. Rptr. 362, 754 P.2d 708].) We agree that by its plain terms Water Code section 13267 is inapplicable at the TMDL stage, and thus the court erred by invalidating the Trash TMDL on this ground. The monitoring and reports are required by the December 21, 2001 order, not the Trash TMDL, and the reduction of trash will be implemented by other NPDES permits. "TMDLs are primarily informational tools that allow the states to proceed from the identification of waters requiring additional planning to the required plans." (*Pronsolino v. Nastri* (9th Cir. 2002) 291 F.3d 1123, 1129.) **(8)** [HN12]"A TMDL does not, by itself, [***34] prohibit any conduct or require any actions. Instead, each TMDL represents a goal that may be implemented by adjusting pollutant discharge requirements in individual NPDES permits or establishing nonpoint source [*1415] controls." (*City of Arcadia I, supra*, 265 F. Supp. 2d at p. 1144.) A "TMDL forms the basis for further administrative actions that may require or prohibit conduct with respect to particularized pollutant discharges and water[]bodies." (*Id.* at p. 1145.)

B

Water Code Section 13241

[HN13]Water Code section 13241 provides that "[e]ach regional board shall establish such water quality objectives in water quality control plans as in its judgment will ensure the reasonable protection of beneficial uses and the prevention of nuisance." In establishing water quality objectives a regional board is required to consider several factors, including "[e]conomic considerations." (Wat. Code, § 13241, subd. (d).)

The Water Boards contend Water Code section 13241 is inapplicable because the Trash TMDL does not establish water quality objectives, but [***35] merely implements, under Water Code section 13242, the existing narrative water quality objectives in the 1994 Basin Plan. It provides that waters shall not contain floating materials, including solids, or suspended or settleable materials in concentrations that adversely affect beneficial uses. The Cities counter that the Trash TMDL effectively establishes new water quality objectives, because when the 1994 Basin Plan was adopted a TMDL for trash was not contemplated and thus economic considerations of such a TMDL were not considered. Further, the Trash TMDL imposes for the first time a numeric limit for trash and significantly increases the costs of compliance.

We need not, however, decide whether the Trash TMDL adopts new or revised water quality objectives within the meaning of Water Code section 13241, because even if the statute is applicable, the Water Boards sufficiently complied with it. [9] Water Code section 13241, subdivision (d) does not define "economic considerations" or specify a particular manner of com-

pliance, and thus, as the Water Boards assert, the matter is within a regional [**389] board's discretion. [***36] It appears there is no reported opinion analyzing the "economic considerations" phrase of this statute. In *City of Burbank, supra*, 35 Cal.4th at page 625, the court, without discussion, concluded that in adopting Water Code section 13241 the Legislature intended "that a regional board consider the *cost of compliance* [with numeric pollutant restrictions] when setting effluent limitations in a wastewater discharge permit." (Italics added.)

> 9 For the same reason, we are not required to reach the Water Boards' assertion that to any extent the California Supreme Court's recent opinion in *City of Burbank, supra*, 35 Cal.4th 613, applies to a TMDL, it precludes them from considering economic factors in establishing the Trash TMDL.

[*1416] The Trash TMDL discusses the costs of gathering and disposing of trash at the mouth of the Los Angeles River watershed during the rainy seasons between 1995 and 1999. It also states: "Cleaning up the river, its tributaries and [***37] the beaches is a costly endeavor. The Los Angeles County Department of Public Works contracts out the cleaning of over 75,000 catchments (catch basins) for a total cost of slightly over $ 1 million per year, billed to 42 municipalities. ... [¶] Over 4,000 tons of trash are collected from Los Angeles County beaches annually, at a cost of $ 3.6 million to Santa Monica Bay communities in fiscal years 1988-1989 alone. In 1994 the annual cost to clean the 31 miles of beaches (19 beaches) along Los Angeles County was $ 4,157,388."

The Trash TMDL also discusses the costs of various types of compliance measures, and explains the "cost of implementing this TMDL will range widely, depending on the method that the Permittees select to meet the Waste Load Allocations. Arguably, enforcement of existing litter ordinances could be used to achieve the final Waste Load Allocations at minimal or no additional cost. The most costly approach in the short-term is the installation of full-capture structural treatment devices on all discharges into the river. However, in the long term this approach would result in lower labor costs and may be less expensive than some other approaches."

The Trash TMDL [***38] defines catch basin inserts as "the least expensive structural treatment device in the short term," at a cost of approximately $ 800 each. It cautions, however, that because catch basin inserts "are not a full capture method, they must be monitored frequently and must be used in conjunction with frequent street sweeping." The Trash TMDL estimates that if the approximately 150,000 catch basins throughout the watershed were retrofitted with inserts, capital costs would be $ 120 million over 10 years, maintenance and operation costs would be $ 330 million over 10 years, and maintenance and operation costs after full implementation would be $ 60 million per year.

Further, the Trash TMDL discusses the full capture vortex separation system (VSS), which "diverts the incoming flow of storm[]water and pollutants into a pollutant separation and containment chamber. Solids within the separation chamber are kept in continuous motion, and are prevented from blocking the screen so that water can pass through the screen and flow downstream. This is a permanent device that can be retrofitted for oil separation as well. Studies have shown that VSS [units] remove virtually all of the trash contained [***39] in treated water. The cost of installing a VSS is assumed to be high, so limited funds will place a cap on the number of units which can be installed during any single fiscal year."

[*1417] The Trash TMDL estimates the retrofitting of the entire Los Angeles River watershed with low capacity VSS units would be $ 945 million in capital costs and $ 813 million in operation and maintenance costs over 10 years, and $ 148 million in annual operation and maintenance costs after full implementation. The installation of large capacity VSS units would run [**390] approximately $ 332 million in capital costs and $ 41 million in operation and maintenance costs over 10 years, and $ 7.4 million per year in operation and maintenance costs after full implementation. The yearly cost of servicing one VSS unit is estimated to be $ 2,000. The Trash TMDL explains that "outfitting a large drainage with a number of large VSS [units] may be less costly than using a larger number of small VSS [units]. Maintenance costs decrease dramatically as the size of the system increases." The Trash TMDL also contains a cost comparison of catch basin inserts and low capacity and large capacity VSS units.

Additionally, the Trash [***40] TMDL estimates the costs for end-of-pipe nets at between $ 10,000 and $ 80,000, depending on the length of the pipe network. It explains that " '[r]elease nets' are a relatively economical way to monitor trash loads from municipal drainage systems. However, in general they can only be used to monitor or intercept trash at the end of a pipe and are considered to be partial capture systems, as nets are usually sized at a 1/2&inches; to 1&inches; mesh."

The Cities assert that "a 'consideration' of economics should have included a discussion of the economic *impacts* associated with the vortex separation systems. Alternatively, the Water Boards could have analyzed other methods of compliance, such as a series of [best management practices], including increased street sweeping,

catch basin inserts, release nets, or some other combination of [best management practices] that should have been evaluated for purposes of allowing the municipalities to be in deemed compliance with the zero [Trash] TMDL." (Italics added.) As stated, though, the Trash TMDL does include the estimated costs of several types of compliance methods and a cost comparison of capital costs and costs of operation and maintenance. [***41] The Cities cite no authority for the proposition that a consideration of economic factors under Water Code section 13241 must include an analysis of every conceivable compliance method or combinations thereof or the fiscal impacts on permittees.

Given the lack of any definition for "economic considerations" as used in Water Code section 13241, and our deference to the Water Boards' expertise, we conclude the Trash TMDL's discussion of compliance costs is adequate [*1418] and does not fulfill the arbitrary or capricious standard. Accordingly, the Trash TMDL is not invalid on this ground. [10]

> 10 The Cities also assert that under federal law an economic analysis is a prerequisite to the adoption of a TMDL. They rely on 40 Code of Federal Regulations, part 130.6(c)(4), but it pertains to nonpoint sources of pollution that need not be addressed in a TMDL, as discussed further *post*. The portion of the regulation covering TMDL's does not mention economics (*id.*, § 130.6(c)(1)). Parts 130.6(5) and (6) of 40 Code of Federal Regulations discuss economics, but in the context of the area wide planning process under section 208(b)(2) of the Clean Water Act (33 U.S.C. § 1288(b)(2)), which is inapplicable here. According to the Water Boards, the Southern California Association of Governments is the designated area-wide planning agency.

[***42] IV

Los Angeles River Estuary

Additionally, the Water Boards challenge the court's finding they abused their discretion by attempting to include the Estuary in the Trash TMDL, as the Estuary is not on the state's 1998 303(d) list of impaired waters. The Water Boards contend a water body's formal listing on the state's 303(d) list is not a prerequisite to formulating a TMDL for it. Rather, an agency may simultaneously submit to the EPA the *identification* of a [**391] water body as impaired and a corresponding TMDL.

[HN14]The Clean Water Act provides: "Each state shall identify those waters within its boundaries for which the effluent limitations ... are not stringent enough to implement any water quality standards applicable to such waters. The State shall establish a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of such waters." (33 U.S.C. § 1313(d)(1)(A).) Further, it provides that "[e]ach state shall establish for the waters identified in paragraph (1)(A) of this subsection, and in accordance with the priority ranking, the total maximum daily load ... ." (*Id.* at § 1313(d)(1)(C).) [***43] These provisions do not prohibit a regional board from identifying a water body and establishing a TMDL for it at essentially the same time, or indicate that formal designation on a state's 303(d) list is a prerequisite to a TMDL.

Further, 33 United States Code section 1313(d)(2) provides: "Each State shall submit to the [EPA] Administrator from time to time, ... for his [or her] approval the waters identified *and* the loads established under paragraphs (1)(A) [and] ... (1)(C) ... of this subsection. The [EPA] Administrator shall either approve or disapprove such identification *and* load not later than thirty days after the date of submission." (Italics added.) This clarifies that a regional board may simultaneously identify an impaired water body and establish a TMDL for it.

[*1419] In *San Francisco BayKeeper v. Whitman, supra*, 297 F.3d 877, 884-885, the court held an agency has no *duty* to submit a TMDL at the same time it identifies an impaired water body, noting the development of a TMDL "to correct the pollution is obviously a more intensive and time-consuming project than simply identifying the polluted waters, as the [***44] EPA has indicated." (*Id.* at p. 885.) The Water Boards assert the case does not deprive an agency from exercising its *discretion* to simultaneously submit to the EPA the identification of an impaired water body and a TMDL for it. Given the plain language of 33 United States Code section 1313(d)(2), we agree. Moreover, [HN15]"[s]tates remain at the front line in combating pollution" (*City of Arcadia II, supra*, 411 F.3d at p. 1106), and "[s]o long as the [s]tate does not attempt to adopt more *lenient* pollution control measures than those already in place under the [Clean Water] Act, [it] does not prohibit state action." (*Id.* at p. 1107.)

Alternatively, the Cities complain the Regional Board did not sufficiently identify the Estuary as being impaired and included in the Trash TMDL until after its adoption and approval by the State Board and Office of Administrative Law and the completion of all public hearings. On July 29, 2002, the Regional Board sent the EPA a memorandum "to provide clarification on specific aspects" of the Trash TMDL. It stated that a "TMDL was established for the reaches of the Los [***45] Angeles River, tributaries and lakes listed on the [state's] 1998 303(d) list," and "[i]n addition, a TMDL was established for the Los Angeles River [E]stuary in the City of Long Beach. As described on page 12, paragraph 2 of the

[staff] report, staff found that the impairment in the [E]stuary due to trash is 'even more acute in Long Beach where debris flushed down by the upper reaches collects.' [¶] The impairment in the [E]stuary was well documented during TMDL development," and it "would have been included in the 1998 303(d) list if the attached photographic evidence had been available at the time of the listing."

The Trash TMDL lists the reaches of the Los Angeles River "that are impaired by trash, and listed on the [state's] 303(d) [**392] list." The list does not include the Estuary. The Water Boards assert that even so, it was always obvious the Estuary is impaired and included in the Trash TMDL. The Trash TMDL states it is "for the Los Angeles River Watershed," and "watershed" is defined as "a region or area bounded peripherally by a divide and draining ultimately to a particular watercourse or body of water." (Merriam-Webster's Collegiate Dict. (10th ed. 1996) p. [***46] 1336.) ?Estuary" is defined as "a water passage where the tide meets a river current," especially "an arm of the sea at the lower end of a river." (*Id.* at p. 397.)

The Trash TMDL describes the watershed as beginning at the "western end of the San Fernando Valley to the Queensway Bay and Pacific Ocean at Long Beach," and it also states the watershed continues from "Willow Street all [*1420] the way through the [E]stuary." An amici curiae brief by Santa Monica BayKeeper, Inc., Heal the Bay, Inc., and Natural Resources Defense Council, Inc. (collectively BayKeeper), asserts Queensway Bay is the site of the Estuary, and no party has challenged the assertion. Further, the Trash TMDL lists and discusses the beneficial uses of the Estuary, including habitat for many species of birds, some endangered, and fish. It also states beneficial uses "are impaired by large accumulations of suspended and settled debris throughout the river system," and in particular "estuarine habitat" is impaired. Further, the administrative record contains several pictures of trash deposited in the Estuary during high flows, depicting "the variety of ways through which trash ... becomes an integral part of wildlife, [***47] affecting all plant and animal communities in the process."

The Trash TMDL's identification of the Estuary as impaired could have been clearer, but we conclude it was sufficient to put all affected parties on notice, and does not meet the arbitrary-and-capricious standard. Further, although the identification of impaired water bodies requires a priority ranking (33 U.S.C. § 1313(d)(2)), and the Trash TMDL does not prioritize the Estuary's need for a TMDL, we agree with amici curiae BayKeeper that any error in the Water Boards' procedure was not prejudicial because the Trash TMDL shows amelioration of the trash problem in the entire Los Angeles River watershed is highly important, and it is unlikely the Water Boards would single out the Estuary for lower priority or that inclusion of the Estuary would disturb their existing priorities.

V

CEQA

(9) The Water Boards challenge the sufficiency of the evidence to support the trial court's finding that the amendment adding the Trash TMDL to the 1994 Basin Plan does not comport with CEQA. The court found the Regional Board's environmental checklist was deficient and there is sufficient evidence of a fair argument that [***48] the project may have a significant effect on the environment, thus necessitating an EIR or its functional equivalent. We conclude the court was correct.

A

General Legal Principles

(10) [HN16]"CEQA compels government first to identify the environmental effects of projects, and then to mitigate those adverse effects through the [*1421] imposition of feasible mitigation measures or through the selection of feasible alternatives." (*Sierra Club v. State Bd. of Forestry* (1994) 7 Cal.4th 1215, 1233 [32 Cal. Rptr. 2d 19, 876 P.2d 505].) CEQA mandates that public agencies refrain from approving projects with significant environmental effects if [**393] there are feasible alternatives or mitigation measures that can substantially lessen or avoid those effects. (*Mountain Lion Foundation v. Fish & Game Com.* (1997) 16 Cal.4th 105, 134 [65 Cal. Rptr. 2d 580, 939 P.2d 1280].)

[HN17]CEQA is implemented through initial studies, negative declarations and EIR's. (*Sierra Club v. State Bd. of Forestry, supra*, 7 Cal.4th at p. 1229.) "CEQA requires a governmental agency [to] prepare an [EIR] whenever it considers approval of a proposed project that *'may* have a *significant* effect on the environment.' " (*Quail Botanical Gardens Foundation, Inc. v. City of Encinitas, supra*, 29 Cal.App.4th at p. 1601.) [***49] "If there is no substantial evidence a project 'may have a significant effect on the environment' or the initial study identifies potential significant effects, but provides for mitigation revisions which make such effects insignificant, a public agency must adopt a negative declaration to such effect and, as a result, no EIR is required. [Citations.] However, the Supreme Court has recognized that CEQA requires the preparation of an EIR 'whenever it can be fairly argued on the basis of substantial evidence that the project may have significant environmental impact.' [Citations.] Thus, if substantial evidence in the record supports a 'fair argument' significant

impacts or effects may occur, an EIR is required and a negative declaration cannot be certified." (*Id.* at pp. 1601-1602.)

[HN18]" 'Significant effect on the environment? means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the [***50] environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant." (Cal. Code Regs., tit. 14, § 15382.)

B

Certified Regulatory Program

[HN19]**(11)** "State regulatory programs that meet certain environmental standards and are certified by the Secretary of the California Resources Agency are exempt from CEQA's requirements for preparation of EIRs, negative declarations, and initial studies. [Citations.] Environmental review documents prepared by certified programs may be used instead of environmental documents that CEQA would otherwise require. [Citations.] Certified regulatory [*1422] programs remain subject, however, to other CEQA requirements." (2 Kostka & Zischke, Practice Under the Cal. Environmental Quality Act (Cont.Ed.Bar 2005) § 21.2, p. 1076; see Pub. Resources Code, § 21080.5.) Documents prepared by certified programs are considered the "functional equivalent" of documents CEQA would otherwise require. (*Mountain Lion Foundation v. Fish & Game Com., supra*, 16 Cal.4th at p. 113; 2 Kostka & Zischke, Practice Under the Cal. Environmental [***51] Quality Act, *supra*, § 21.10, p. 1086 ["the documentation required of a certified program essentially duplicates" that required for an EIR or negative declaration].)

An "agency seeking certification must adopt regulations requiring that final action on the proposed activity include written responses to significant environmental points raised during the decisionmaking process. [Citation.] The agency must also implement guidelines for evaluating the proposed activity consistently with the [**394] environmental protection purposes of the regulatory program. [Citation.] The document generated pursuant to the agency's regulatory program must include alternatives to the proposed project and mitigation measures to minimize significant adverse environmental effects [citation], and be made available for review by other public agencies and the public [citation]." (*Mountain Lion Foundation v. Fish & Game Com., supra*, 16 Cal.4th at p. 127.)

[HN20]**(12)** The guidelines for implementation of CEQA (Cal. Code Regs., tit. 14, § 15000 et seq.) do not directly apply to a certified regulatory program's environmental document. (2 Kostka & Zischke, [***52] Practice Under the Cal. Environmental Quality Act, *supra*, § 21.10, p. 1086.) However, "[w]hen conducting its environmental review and preparing its documentation, a certified regulatory program is subject to the broad policy goals and substantive standards of CEQA." (*Ibid.*)

In a certified program, an environmental document used as a substitute for an EIR must include "[a]lternatives to the activity and mitigation measures to avoid or reduce any significant or potentially significant effects that the project might have on the environment," and a document used as a substitute negative declaration must include a "statement that the agency's review of the project showed that the project would not have any significant or potentially significant effects on the environment and therefore no alternatives or mitigation measures are proposed to avoid or reduce any significant effects on the environment. This statement shall be supported by a checklist or other documentation to show the possible effects that the agency examined in reaching this conclusion." (Cal. Code Regs., tit. 14, § 15252, subd. (a)(2)(A), (B).)

The basin planning process of the State Board and regional boards is [***53] a certified regulatory program (Cal. Code Regs., tit. 14, § 15251, subd. (g)), and [*1423] the regulations implementing the program appear in the California Code of Regulations, title 23, sections 3775 to 3782. [HN21]A regional board's submission of a plan for State Board approval must be accompanied by a brief description of the proposed activity, a completed environmental checklist prescribed by the State Board, and a written report addressing reasonable alternatives to the proposed activity and mitigation measures to minimize any significant adverse environmental impacts. (*Id.*, § 3777, subd. (a).)

C

Environmental Documentation

The Regional Board's environmental documentation in lieu of documents CEQA ordinarily requires consists of a checklist and the Trash TMDL. The checklist asked a series of questions regarding whether implementation of the Trash TMDL would cause environmental impacts, to which the Regional Board responded "yes," "maybe" or "no." "Yes" or "maybe" answers required an explanation. The checklist described beneficial impacts pertaining to plant and animal life, water quality [***54] and recreation. The checklist denied the project would have any environmental impact on land, including soil displacement, air, noise, natural resources or traffic, and

thus it included no discussion of those factors. The checklist concluded "the proposed Basin Plan amendment [adding the Trash TMDL] could not have a significant effect on the environment."

The Regional Board obviously intended its documentation to be the functional equivalent of a negative declaration. Nonetheless, on appeal the Water Boards claim for the first time that the Regional [**395] Board's environmental review process is tiered, and its documentation meets the requirements of a first tier EIR under Public Resources Code section 21159. They assert the court's criticism of the checklist is baseless "because it ignores the concept of tiered environmental review and specific provisions for pollution control performance standards."

[HN22]" 'Tiering' refers 'to the coverage of general matters in broader EIRs (such as on general plans or policy statements) with subsequent narrower EIRs or ultimately *site-specific* EIRs incorporating by reference the general discussions and concentrating solely [***55] on the issues specific to the EIR subsequently prepared. Tiering is appropriate when the sequence of EIRs is: [¶] ... [f]rom a general plan, policy, or program EIR to a ... site-specific EIR.' " (*Natural Resources Defense Council, Inc. v. City of Los Angeles* (2002) 103 Cal.App.4th 268, 285 [126 Cal. Rptr. 2d 615].) "[C]ourts have allowed first tier EIR's to defer detailed analysis to subsequent project EIR's." (*Friends of* [*1424] *Mammoth v. Town of Mammoth Lakes Redevelopment Agency* (2000) 82 Cal.App.4th 511, 532 [98 Cal. Rptr. 2d 334].)

(13) [HN23]Public Resources Code section 21159, which allows expedited environmental review for mandated projects, provides that an agency "shall perform, at the time of the adoption of a rule or regulation requiring the installation of pollution control equipment, or a performance standard or treatment requirement, an environmental analysis of the reasonably foreseeable methods of compliance. ... The environmental analysis shall, at [a] minimum, include, all of the following: [¶] (1) An analysis of the reasonably foreseeable environmental impacts of the methods of compliance. [¶] (2) An analysis of reasonably foreseeable mitigation measures. [***56] [¶] (3) An analysis of reasonably foreseeable alternative means of compliance with the rule or regulation." (Pub. Resources Code, § 21159, subd. (a).) The Water Boards submit they complied with the statute, and the "tier two environmental review is the responsibility of the local agencies who will determine how they intend to comply with the performance standards" of the Trash TMDL.

[HN24]Issues not presented to the trial court are ordinarily waived on appeal. (*Royster v. Montanez* (1982) 134 Cal. App. 3d 362, 367 [184 Cal. Rptr. 560].) In any event, we conclude the checklist and Trash TMDL are insufficient as either the functional equivalent of a negative declaration [11] or a tiered EIR. Moreover, an EIR is required since the Trash TMDL itself presents substantial evidence of a fair argument that significant environmental impacts may occur. [HN25]"Because a negative declaration ends environmental review, the fair argument test provides a low threshold for requiring an EIR." (*Ocean View Estates Homeowners Assn., Inc. v. Montecito Water Dist.* (2004) 116 Cal.App.4th 396, 399 [10 Cal. Rptr. 3d 451].)

> 11 A negative declaration may not be based on a " 'bare bones' " approach in a checklist. (*Snarled Traffic Obstructs Progress v. City and County of San Francisco* (1999) 74 Cal.App.4th 793, 797, fn. 2 [88 Cal. Rptr. 2d 455], and cases cited therein.) A "certified program's statement of no significant impact must be supported by documentation *showing* the potential environmental impacts that the agency examined in reaching its conclusions," and "[t]his documentation would be similar to an initial study." (2 Kostka & Zischke, Practice Under the Cal. Environmental Quality Act, *supra,* § 21.11, pp. 1088-1089, italics added.) Because we conclude an EIR is required, we need not expand on how the checklist and Trash TMDL fail to satisfy negative declaration requirements or their functional equivalent.

[***57] [**396] The Trash TMDL discusses various compliance methods or combinations thereof that permittees may employ, including the installation of catch basin inserts and VSS units. The Trash TMDL estimates that if the catch basin method is used exclusively, approximately 150,000 catch basins throughout the watershed would require retrofitting at a cost of approximately $ 120 million. It explains, however, that the "ideal way to capture trash deposited into a storm[]drain system would be to install a VSS unit. This device diverts [*1425] the incoming flow of storm[]water and pollutants into a pollution separation and containment chamber." Only VSS units or similar full-capture devices will be deemed fully compliant with the zero trash target. The Trash TMDL estimates the cost of installing low capacity VSS units would be $ 945 million and the cost of installing large capacity VSS units would be $ 332 million.

The checklist and the Trash TMDL, however, ignore the temporary impacts of the construction of these pollution controls, which logically may result in soils disruptions and displacements, an increase in noise levels and changes in traffic circulation. Further, the Trash TMDL explains that since [***58] catch basin inserts "are not a full capture method, they must be monitored frequently

and must be used in conjunction with frequent street sweeping." The checklist and the Trash TMDL also ignore the effects of increased street sweeping on air quality, and possible impacts caused by maintenance of catch basin inserts, VSS units and other compliance methods.

Indeed, the County of Los Angeles wrote to the Regional Board that "cleanout of structural controls, such as [catch basin inserts] and VSSs, naturally will increase existing noise levels due to vehicle and vacuuming noises." The City of Los Angeles advised that the Trash TMDL would result in increased maintenance vehicle traffic and "substantial air emissions or deterioration of ambient air quality," increased noise, increased use of natural resources and adverse impacts on existing transportation systems.

The Water Boards contend those comments are merely "unsubstantiated opinion and speculation by biased project opponents." [HN26]Substantial evidence is not "[a]rgument, speculation, unsubstantiated opinion or narrative [or] evidence which is clearly inaccurate or erroneous." (Pub. Resources Code, § 21082.2, subd. (c).) [***59] However, letters and testimony from government officials with personal knowledge of the anticipated effects of a project on their communities "certainly supports a fair argument that the project may have a significant environmental impact." (*City of Livermore v. Local Agency Formation Com.* (1986) 184 Cal. App. 3d 531, 542 [230 Cal. Rptr. 867].) Again, however, the Trash TMDL itself satisfies the fair argument criterion.

Even if the Water Boards had relied on Public Resources Code section 21159 at the trial court, the environmental documents do not meet its minimum requirements. Neither the checklist nor the Trash TMDL includes an analysis of the reasonably foreseeable impacts of construction and maintenance of pollution control devices or mitigation measures, and in fact the Water Boards develop no argument as to how they ostensibly complied with the statute. While we agree a tiered environmental analysis is appropriate here, the Regional Board did not prepare a first-level EIR or its functional equivalent. We reject the Water Boards' argument the Regional Board did all it [*1426] could because there "is no way to examine project level [***60] impacts that are entirely dependent upon the speculative possibilities of how subsequent [**397] decision[]makers may choose to comply" with the Trash TMDL. Tier two project-specific EIR's would be more detailed under Public Resources Code section 21159.2, but the Trash TMDL sets forth various compliance methods, the general impacts of which are reasonably foreseeable but not discussed.

As a matter of policy, in CEQA cases a public agency must explain the reasons for its actions to afford the public and other agencies a meaningful opportunity to participate in the environmental review process, and to hold it accountable for its actions. (*Federation of Hillside & Canyon Assns. v. City of Los Angeles, supra*, 126 Cal.App.4th 1180, 1198.) The Water Boards' CEQA documentation is inadequate, and remand is necessary for the preparation of an EIR or tiered EIR, or functional equivalent, as substantial evidence raises a fair argument the Trash TMDL may have significant impacts on the environment. The court correctly invalidated the Trash TMDL on CEQA grounds. [12]

12 The Water Boards also contend the trial court erred by staying the implementation schedule for the Trash TMDL pending this appeal. The matter is moot given our holding on the CEQA issue.

[***61] VI

Declaratory Relief

In its statement of decision, the trial court explained the Cities "contend [the Water Boards] improperly attempted to control the watershed including the 'entire 584 square miles' of incorporated and unincorporated areas of the County [of Los Angeles], and nowhere in the [Trash] TMDL or the [1994] Basin Plan Amendment did [they] assert that the numeric Waste Load Allocations ... are to apply to the entire 584 square miles of watershed." The court, however, explained the Water Boards "concede the [Trash] TMDL only applies to navigable waters by asserting [they] didn't intend to control non-navigable waters," and it found "the parties are in agreement that the trash load allocations apply to the portion of the subject watershed as defined on pages 3575 and 3584 of the Administrative Record [pages of the Trash TMDL] and the Waste Load Allocations do not apply to non-waters."

The statement of decision nonetheless states the court granted the Cities' "relief as requested" as to "regulation of non-waters." In their third cause of action, the Cities sought a judicial declaration that the amendment to the 1994 Basin Plan and the Trash [***62] TMDL are invalid because they violate federal and state law. The judgment declared unenforceable a July 29, 2002, letter from [*1427] the Regional Board to the EPA that stated the "Waste Load Allocations apply to the entire urbanized portion of the watershed ... . The urbanized portion of the watershed was calculated to encompass 584 square miles of the total watershed."

(14) [HN27]"The fundamental basis of declaratory relief is the existence of an *actual, present controversy.*" (5 Witkin, Cal. Procedure, *supra*, Pleadings, § 817, p. 273.) Because the parties agreed during this proceeding there was no *present* controversy, the judgment should

not have included declaratory relief on the nonwaters issue.

CITIES' APPEAL

I

Concepts of "Maximum Extent Practicable" and "Best Management Practices"

(15) The Cities contend a zero target for trash in the Los Angeles River is unattainable, [**398] and thus the Trash TMDL violates the law by not deeming compliance through the federal "maximum extent practicable" and "best management practices" standards, which are less stringent than the numeric target of zero. The Cities rely on [HN28]33 United States Code section 1342(p)(3)(B)(iii), [***63] under which an NPDES permit for a municipal discharge into a storm drain "shall require controls to reduce the discharge of pollutants to the *maximum extent practicable*, including management practices, control techniques and system, design and engineering methods, and such other provisions as the [EPA] Administrator or the State determines appropriate for the control of such pollutants." (Italics added.) [13] "Best management practices" are generally pollution control measures set forth in NPDES permits. (*BIA, supra*, 124 Cal.App.4th at p. 877.)

> 13 The Clean Water Act and applicable regulations do not define the maximum extend practicable standard. (*Building Industry Assn. of San Diego County v. State Water Resources Control Bd.* (2004) 124 Cal.App.4th 866, 889 [22 Cal. Rptr. 3d 128] (*BIA*).) In *BIA,* the NPDES permit at issue defined the standard as "a highly flexible concept that depends on balancing numerous factors." (*Ibid.*)

The Cities assert that "as the [r]ecord [***64] reflects, compliance with the 'zero' [Trash] TMDL ... is impossible," and the Water Boards "themselves recognize that 'zero' is an impossible standard to meet." Contrary to the Cities' suggestion, the Water Boards made no implied finding or concession of impossibility. Rather, the record shows that members of the Water Boards questioned whether a zero trash target is actually attainable. A zero limit on [*1428] trash within the meaning of the Trash TMDL *is* attainable because there are methods of deemed compliance with the limit. The record does not show the limit is unattainable, and the burden was on the Cities as opponents of the Trash TMDL to establish impossibility. Further, the impossibility issue is not germane at this juncture, as the matter is at the planning stage with an interim goal of a 50 percent reduction in trash, a goal everyone agrees is necessary and achievable.

In any event, the trial court found 33 United States Code section 1342(p)(3)(B)(iii) inapplicable to the adoption of a TMDL. The court also found state and federal laws authorize regional boards to "use water quality, and not be limited to practicability as the guiding principle for [***65] developing limits [in a TMDL] on pollution." Further, the court noted the Cities presented no authority for their proposition the Regional Board is required to adopt a storm water TMDL that is achievable.

(16) We agree with the court's assessment. [HN29]The statute applicable to establishing a TMDL, 33 United States Code section 1313(d)(1)(C), does not suggest that practicality is a consideration. To the contrary, a regional board is required to establish a TMDL "at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety." (33 U.S.C. § 1313(d)(1)(C).) The NPDES permit provision, 33 United States Code 1342(p)(3)(B), is inapplicable because, again, we are only considering the propriety of the Trash TMDL, a precursor to NPDES permits implementing it. Under the Trash TMDL, the numeric target will be reconsidered after several years when a reduction in trash of 50 percent is achieved, and thus it is presently unknown whether compliance with a trash limit of zero will ever actually be mandated.

(17) To bolster their position the Cities rely on 33 United States Code section 1329(a)(1)(C)). [***66] [**399] It provides, however, that in a state's assessment report for a *nonpoint* source management program, the state must "describe[] the process, including intergovernmental coordination and public participation, for identifying best management practices and measures to control each category and subcategory of nonpoint sources and, where appropriate, particular nonpoint sources identified under subparagraph (B) and to reduce, to the maximum extent practicable, the level of pollution resulting from such category, subcategory, or source." (*Ibid.*) In *BIA, supra*, 124 Cal.App.4th at page 887, we rejected the argument the statute shows Congress intended to apply a maximum extent practicable standard to point source discharges as well as nonpoint discharges. The Cities say they disagree with *BIA,* but they develop no argument revealing any flaw in the opinion. [HN30]"[P]arties are required [*1429] to include argument and citation to authority in their briefs, and the absence of these necessary elements allows this court to treat appellant's ... issue as waived." (*Interinsurance Exchange v. Collins* (1994) 30 Cal.App.4th 1445, 1448 [37 Cal. Rptr. 2d 126].)

The Cities' reliance [***67] on *Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d 1159, for the

proposition that municipalities, unlike private companies, may not be required to strictly comply with numeric discharge limits is likewise misplaced. *Defenders of Wildlife v. Browner* involves a challenge to an NPDES permit, not the adoption of a TMDL. Further, the court there rejected the argument that "the EPA [or authorized regional or state board] may not, under the [Clean Water Act], require strict compliance with state water-quality standards, through numerical limits or otherwise." (*Id.* at p. 1166.) The court explained: "Although Congress did not require municipal storm-sewer discharges to comply strictly with [numerical effluent limitations], [section] 1342(p)(3)(B)(iii) [of United States Code, title 33] states that '[p]ermits for discharges from municipal storm sewers ... shall require ... *such other provisions as the [EPA] Administrator ... determines appropriate for the control of such pollutants.*' (Emphasis added.) That provision gives the EPA discretion to determine what pollution controls are appropriate. ... [¶] Under that [***68] discretionary provision, the EPA has the authority to determine that ensuring strict compliance with state water-quality standards is necessary to control pollutants. The EPA also has the authority to require less than strict compliance with state water-quality standards. ... Under 33 [United States Code section] 1342(p)(3)(B)(iii), the EPA's choice to include either management practices or numeric limitations in the permits was within its discretion." (*Id.* at pp. 1166-1167.)

In *BIA,* this court similarly held that [HN31]33 United States Code section 1342(p)(3)(B)(iii) does not divest a regional board's discretion to impose an NPDES permit condition requiring compliance with state water quality standards more stringent than the maximum-extent-practicable standard. (*BIA, supra,* 124 Cal.App.4th at pp. 871, 882-885; see also Wat. Code, § 13377 [waste discharge requirements shall meet federal standards and may also include "more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance"].) [***69] Thus, even if the analysis in *Defenders of Wildlife v. Browner* or *BIA* arguably has any application to a TMDL, the opinions do not help the Cities.

(18) Additionally, the Cities' reliance on a November 2002 EPA memorandum on establishing TMDL's and issuing NPDES [**400] permits is misplaced, as it postdates the Regional Board's adoption of the Trash TMDL and its approval by the State Board and the EPA. Further, the memorandum states it [*1430] is not binding, and "indeed, there may be other approaches that would be appropriate in particular situations. [HN32]When EPA makes a TMDL or permitting decision, it will make each decision on a case-by-case basis and will be guided by applicable requirements of the [Clean Water Act] and implementing regulations, taking into account comments and information presented at that time by interested persons regarding the appropriateness of applying these recommendations to the particular situation."

II

Nonpoint Sources of Pollution

The Cities contend the court should have invalidated the Trash TMDL on additional grounds, including the Water Boards' failure to identify load allocations and implementation measures for nonpoint sources of trash discharge. [***70] The Cities assert the Water Boards are required to adopt implementation measures "for the homeless and aerial sources of trash, [and] also for the other nonpoint sources of trash consisting of State and federal facilities, and other facilities not yet subject to NPDES Permits." The Cities submit that the Clean Water Act does not allow the Water Boards "to effectively impose the burden of the load allocation from all nonpoint sources solely on municipalities."

The Cities further claim the Water Boards acted arbitrarily and capriciously by imposing a trash target of zero on municipalities, but imposing a " 'de minimus' requirement on non-point source discharges." The Cities cite the July 29, 2002, letter from the Regional Board to the EPA, clarifying that it identified nonpoint sources of trash pollution "as wind blown trash and direct deposit of trash into the water," but "as the non-point sources were determined to be de-minimus, we did not believe it necessary to outline a reduction schedule for non-point sources." Contrary to the Cities' position, the Regional Board did not adopt a "de minimus" load allocation for nonpoint sources. Rather, as the trial court found, the Regional [***71] Board found the trash pollution from nonpoint sources is de minimus compared to trash pollution from point sources. The TMDL states the "major source of trash in the [Los Angeles River] results from litter, which is intentionally or accidentally discarded in the watershed drainage areas."

In arguing the Trash TMDL is required to include a specific load allocation for nonpoint sources of pollution, the Cities rely on the 2000 EPA Guidance, which provides: "Load allocations for nonpoint sources *may* be expressed as specific allocations for specific discharges or as 'gross allotments' to nonpoint source discharger categories. Separate nonpoint source allocations *should* be established for background loadings. Allocations may be based on a variety [*1431] of technical, economic, and political factors. The methodology used to set allocations *should* be discussed in detail." (Italics added.)

The 2000 EPA Guidance, however, states it does not impose legally binding requirements. Further, the load allocation for nonpoint sources is implicitly zero for trash. Federal regulations define a TMDL as the sum of waste load allocations for point sources, load allocations for nonpoint sources [***72] and natural backgrounds. (40 C.F.R. § 130.2(i) (2003).) Since "[a] TMDL defines the specified maximum amount of a pollutant which can be discharged into a body of water from all sources combined" (*American Wildlands v. Browner* (10th Cir. 2001) 260 F.3d 1192, 1194), [**401] and the Trash TMDL specifies a zero numeric target for trash in Los Angeles River, load allocations are necessarily zero as well as waste load allocations.

Additionally, the Cities cite no authority for the proposition the Water Boards are required to identify an implementation program for nonpoint pollution sources. Again, "[w]here a point is merely asserted by counsel without any argument of or authority for its proposition, it is deemed to be without foundation and requires no discussion." (*People v. Ham* (1970) 7 Cal. App. 3d 768, 783 [86 Cal. Rptr. 906], disapproved on another ground in *People v. Compton* (1971) 6 Cal.3d 55, 60, fn. 3 [98 Cal. Rptr. 217, 490 P.2d 537]; see *People v. Sierra* (1995) 37 Cal.App.4th 1690, 1693, fn. 2 [44 Cal. Rptr. 2d 575].)

(19) In any event, [HN33]although the Clean Water Act focuses on both point and nonpoint sources of pollution, it is settled that [***73] the measure "does not require states to take regulator[y] action to limit the amount of non-point water pollution introduced into its waterways. While the [Clean Water Act] requires states to designate water standards and identify bodies of water that fail to meet these standards, ' "nothing in the [Clean Water Act] demands that a state adopt a regulatory system for nonpoint sources." ' " (*Defenders of Wildlife v. U.S. Environ. Protec., supra*, 415 F.3d at pp. 1124-1125, citing *American Wildlands v. Browner, supra*, 260 F.3d 1192, 1197 ["In the [Clean Water] Act, Congress has chosen not to give the EPA the authority to regulate nonpoint source pollution"]; *Appalachian Power Co. v. Train* (4th Cir. 1976) 545 F.2d 1351, 1373 ["Congress consciously distinguished between point source and nonpoint source discharges, giving EPA authority under the [Clean Water] Act to regulate only the former"]; *City of Arcadia I, supra*, 265 F. Supp. 2d at p. 1145 ["For nonpoint sources, limitations on loadings are not subject to a federal nonpoint source permitting program, and therefore any nonpoint source reductions can be enforced ... only to [***74] the extent that a state institutes such reductions as regulatory requirements pursuant to state [*1432] authority"].) "Nonpoint sources, because of their very nature, are not regulated under the NPDES [program]. Instead, Congress addressed nonpoint sources of pollution in a separate portion of the [Clean Water] Act which encourages states to develop areawide waste treatment management plans." (*Pronsolino v. Marcus, supra*, 91 F. Supp. 2d at p. 1348, citing 33 U.S.C. § 1288; see also 33 U.S.C. § 1329.)

We conclude the court correctly ruled on this issue.

III

Uses To Be Made of Watershed

The Cities next contend the Trash TMDL is invalid because the Water Boards "improperly relied on nonexistent, illegal and irrational 'uses to be made' of the [Los Angeles] River." (Boldface and some capitalization omitted.) The Cities complain that the Trash TMDL states a purported beneficial use of one of numerous reaches of the river on the state's 303(d) list is "recreation and bathing, in particular by homeless people who seek shelter there," and the State Board chairman questioned the legality of such uses. The Cities also assert there is no [***75] evidence to support the Trash TMDL's finding that swimming is an actual use of the river in any location.

The Cities rely on [HN34]section 303(d)(1)(A) of the Clean Water Act (33 U.S.C. § 1313(d)(1)(A)), which provides that in identifying impaired waters for its 303(d) list, states "shall establish a priority ranking for such waters, taking into account the severity of the pollution and the *uses to be made* of such waters." (Italics added.) [**402] The Cities assert "an 'illegal' use cannot be a 'use to be made' for the water body."

Additionally, the Cities cite Water Code section 13241, which requires regional boards to establish water quality objectives in water quality control plans by considering a variety of factors, including "[p]ast, present, and probable future beneficial uses of water." (Wat. Code, § 13241, subd. (a).) They assert the "Water Boards acted contrary to law by basing the [Trash] TMDL on any uses of the [Los Angeles] River other than the actual 'uses to be made' of the River." (Boldface omitted.)

The Cities, however, make no showing of prejudice. Swimming and bathing by the homeless are only [***76] two among numerous other beneficial uses that the Cities do not challenge, and there is no suggestion the numeric target of zero trash in the Los Angeles River would have been less stringent without consideration of the factors the Cities raise.

[*1433] IV

Scientific Methodology

Further, the Cities contend the Trash TMDL is invalid on the additional ground that before adopting and approving it the Water Boards failed to comply with the requisite data collection and analysis. The Cities rely on a federal regulation providing that "[s]tates must establish appropriate monitoring methods and procedures (including biological monitoring) necessary to compile and analyze data on the quality of waters of the United States and, to the extent practicable, ground-waters." (40 C.F.R. § 130.4(a) (2003).) "The State's water monitoring program shall include collection and analysis of physical, chemical and biological data and quality assurance and control programs to assure scientifically valid data" in developing, among other things, TMDL's. (*Id.*, § 130.4(b).)

The trial court rejected the Cities' position, finding they failed to establish the Water Boards' [***77] scientific data is inadequate or scientifically invalid. The court explained the Water Boards "have not failed to conduct ongoing studies, as they say, how else would [they] know the River is impaired by trash[?] And the Record reveals studies relied upon by the Boards."

This argument is a variation on the assimilative capacity study issue, and we similarly reject it. As the Water Boards point out, "trash is different than other pollutants. ... The complex modeling and analytical effort that may be necessary for typical pollutants that may be present in extremely low concentrations have no relevance to calculating a trash TMDL." Further, the Trash TMDL does discuss sources of trash in the Los Angeles River. It states the "City of Los Angeles conducted an Enhanced Catch Basin Cleaning Project in compliance with a consent decree between the [EPA], the State of California, and the City of Los Angeles. The project goals were to determine debris loading rates, characterize the debris, and find an optimal cleaning schedule through enhancing basin cleaning. The project evaluated trash loading at two drainage basins[.]" It goes on to discuss the amounts and types of trash collected [***78] in the drainage basins between March 1992 and December 1994. The Cities cite no authority for the notion the Water Boards may not rely on data collected by another entity.

The Trash TMDL also states "[s]everal studies conclude that urban runoff is the dominant source of trash. The large amounts of trash conveyed by the urban storm water to the Los Angeles River is evidenced by the amount of ... trash that accumulates at the base of storm drains."

[*1434] [**403] Alternatively, the Cities contend a TMDL is not suitable for trash calculation. They rely on 33 United States Code section 1313(d)(1)(C), which provides: [HN35]"Each State shall establish for [impaired] waters ... the total maximum daily load, for those pollutants which the [EPA] Administrator identifies ... as *suitable for such calculation.* Such load shall be established at a level *necessary* to implement the applicable water quality standards with seasonal variations and a margin of safety." (Italics added.)

The Cities also cite a 1978 EPA regulation that states a TMDL is "suitable for ... calculation" only under "proper technical conditions." (43 Fed.Reg. 60662, 60665 (Dec. 28, 1978) [***79] (italics omitted).) "Proper technical conditions" require "the availability of the analytical methods, modeling techniques and data base necessary to develop a technically defensible TMDL." (*Id.* at p. 60662.) The Cities assert the proper technical conditions do not exist, referring to the Trash TMDL's comment that "[e]xtensive research has not been done on trash generation or the precise relationship between rainfall and its deposition in waterways."

The Cities ignore the EPA's determination that a TMDL *may* be calculated for trash as a pollutant. It approved the Regional Board's Trash TMDL, and had previously approved a trash TMDL for the East Fork of the San Gabriel River. (See Cal. Code Regs., tit. 23, § 3933.) Thus, the Cities' view that the 1978 EPA regulation prohibits a TMDL for trash is unfounded. TMDL's for trash are relatively new, and there is no evidence that in 1978 the EPA contemplated their establishment.

We find irrelevant the Cities' discussion of the EPA's proposed July 2000 TMDL "rule," as their federal register citation is not a regulation and merely concerns the 2003 withdrawal of a rule that never took effect. [***80] (68 Fed.Reg. 13608, 13609 (Mar. 19, 2003) ["The July 2000 rule was controversial from the outset"].) In August 2001 the EPA delayed implementation of the July 2000 rule for further consideration, noting that some local government officials argued "some pollutants are not suitable for TMDL calculation." (66 Fed.Reg. 41817, 41819 (Aug. 9, 2001).) Nothing is said, however, about whether a trash TMDL is unsuitable for calculation, and again, the EPA has approved such TMDL's. The withdrawal of the proposed July 2000 rule left the existing rule regarding the establishment of a TMDL in place. (33 U.S.C. § 1313(d)(1)(C).)

V

APA Requirements

Lastly, the Cities contend the trial court erred by finding the Water Boards did not violate the APA. They assert the July 29, 2002, "clarification [*1435] memorandum" from the Regional Board to the EPA makes substantive changes to the Trash TMDL regulation-the inclusion of the Estuary in the Trash TMDL and desig-

nating an allocation of zero for nonpoint pollution sources-violates the notice and hearing provisions of the APA. The Cities also contend the Trash TMDL and the clarification memorandum [***81] "establish[] a regulation in violation of the APA's elements of 'clarity,' 'consistency,' and 'necessity,' as defined in [Government] Code section 11349."

[HN36]**(20)** The APA (Gov. Code, §§ 11340 et seq., 11370) "establishes the procedures by which state agencies may adopt regulations. The agency must give the public notice of its proposed regulatory action [citations]; issue a complete text of the proposed regulation with a statement of the reasons for it [citation]; give interested parties an opportunity to comment on [**404] the proposed regulation [citation]; respond in writing to public comments [citations]; and forward a file of all materials on which the agency relied in the regulatory process to the Office of Administrative Law [citation], which reviews the regulation for consistency with the law, clarity, and necessity [citations]." (*Tidewater Marine Western, Inc. v. Bradshaw* (1996) 14 Cal.4th 557, 568 [59 Cal. Rptr. 2d 186, 927 P.2d 296].) "One purpose of the APA is to ensure that those persons or entities whom a regulation will affect have a voice in its creation [citation], as well as notice of the law's requirements so [***82] that they can conform their conduct accordingly [citation]." (*Id.* at pp. 568-569.)

The APA does not apply to "the adoption or revision of state policy for water quality control" unless the agency adopts a "policy, plan, or guideline, or any revision thereof." (Gov. Code, § 11353, subds. (a), (b)(1).) The Water Boards contend that while the Trash TMDL and amendment adding it to the 1994 Basin Plan are policies or plans covered by the APA, the clarification memorandum is not because it does not revise the terms of the Trash TMDL.

We are not required to reach the issue, because assuming the APA is applicable the Cities' position lacks merit. As to the Estuary, we have determined the Trash TMDL sufficiently notified affected parties of its inclusion in the document as an impaired water body. Further, we have determined the load allocation for nonpoint sources of trash pollution is also necessarily zero, and the Trash TMDL is not required to include implementation measures for nonpoint sources. Accordingly, the clarification memorandum is not germane. [14]

14 We deny the Water Boards' June 16, 2005, request for judicial notice.

[***83]

[*1436] DISPOSITION

The judgment is affirmed insofar as it is based on the Trash TMDL's violation of CEQA, and on a rejection of each of the issues the Cities raised in their appeal. The judgment is reversed insofar as it is based on the Trash TMDL's lack of an assimilative capacity study, inclusion of the Estuary as an impaired water body, and a cost-benefit analysis under Water Code section 13267 or the consideration of economic factors under Water Code section 13241, and also insofar as it grants declaratory relief regarding the purported inclusion of nonnavigable waters in the Trash TMDL.

The court's postjudgment order staying the Trash TMDL's implementation schedule is affirmed. The parties are to bear their own costs on appeal.

McIntyre, J., and Irion, J., concurred.

A petition for a rehearing was denied January 17, 2006, and the petition of plaintiffs and appellants for review by the Supreme Court was denied April 19, 2006, S141673.

TAB "6"

LEXSEE

Caution
As of: Jun 17, 2010

BUILDING INDUSTRY ASSOCIATION OF SAN DIEGO COUNTY et al., Plaintiffs and Appellants, v. STATE WATER RESOURCES CONTROL BOARD et al., Defendants and Respondents; SAN DIEGO BAYKEEPER et al., Interveners and Respondents.

D042385

COURT OF APPEAL OF CALIFORNIA, FOURTH APPELLATE DISTRICT, DIVISION ONE

124 Cal. App. 4th 866; 22 Cal. Rptr. 3d 128; 2004 Cal. App. LEXIS 2073; 2004 Cal. Daily Op. Service 10694; 2004 Daily Journal DAR 14492; 34 ELR 20149

December 7, 2004, Filed

NOTICE:

As modified Jan. 4, 2005. [***1] CERTIFIED FOR PARTIAL PUBLICATION [1]

1 Pursuant to California Rules of Court, rule 976.1, this opinion is certified for publication with the exception of Discussion parts III, IV, V, VI and VII.

SUBSEQUENT HISTORY: Modified by, Rehearing denied by Building Industry Assn. v. State Water Resources Control Bd., 2005 Cal. App. LEXIS 7 (Cal. App. 4th Dist., Jan. 4, 2005)
Time for Granting or Denying Review Extended Building Industry Assn. of San Diego v. Calif Regional Water Qlty Bd., 2005 Cal. LEXIS 2502 (Cal., Feb. 24, 2005)
Review denied by, Request denied by Building Industry Association of San Diego County v. California Regional Water Quality Control Board, 2005 Cal. LEXIS 3489 (Cal., Mar. 30, 2005)

PRIOR HISTORY: Superior Court of San Diego County, No. GIC 780263, Wayne L. Peterson, Judge.

DISPOSITION: Affirmed.

CASE SUMMARY:

PROCEDURAL POSTURE: Plaintiff building industry association filed an administrative appeal with defendant California Water Resources Control Board (State Water Board) regarding the Board's issuance of a comprehensive municipal storm sewer permit. The Board denied the appeal. The association then petitioned for a writ of mandate, asserting numerous claims. The Superior Court of San Diego County, California, found the association failed to prove its claims.

OVERVIEW: The association argued that the permit violated federal law because it allowed the State Water Board and a regional water board to impose municipal storm sewer control measures more stringent than a federal standard known as "maximum extent practicable" set forth in 33 U.S.C.S. § 1342(p)(3)(B)(iii). The instant court held the language of § 1342(p)(3)(B)(iii) communicates the basic principle that the Environmental Protection Agency, and/or a state approved to issue a National Pollution Discharge Elimination System (NPDES) permit, retains the discretion to impose "appropriate" water pollution controls in addition to those that come within the definition of "maximum extent practicable." The NPDES permit did not violate federal law. The water boards had the authority to include a permit provision requiring compliance with the more stringent state water quality standards.

OUTCOME: The judgment was affirmed.

CORE TERMS: water quality, water board, storm sewer, Clean Water Act, 'practicable', pollution, maximum, pollutant, municipality, municipal, regional, federal law, environmental, effluent, stringent, challenging, runoff, storm, state laws, regulatory agency, "point sources", iterative, stormwater, entity, Conservation Laws, statutory language, waste discharge, permit requirements, strict compliance, industrial

LexisNexis(R) Headnotes

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > Effluent Limitations
[HN1]The Clean Water Act employs the basic strategy of prohibiting pollutant emissions from "point sources" unless the party discharging the pollutants obtains a National Pollution Discharge Elimination System (NPDES) permit. It is unlawful for any person to discharge a pollutant without obtaining a permit and complying with its terms. 33 U.S.C.S. § 1311(a). An NPDES permit is issued by the Environmental Protection Agency or by a state that has a federally-approved water quality program. 33 U.S.C.S. § 1342(a), (b). Before an NPDES is issued, the federal or state regulatory agency must follow an extensive administrative hearing procedure. 40 C.F.R. §§ 124.3, 124.6, 124.8, 124.10. NPDES permits are valid for five years. 33 U.S.C.S. § 1342(b)(1)(B).

Environmental Law > Water Quality > Clean Water Act > Coverage & Definitions > Point Sources
[HN2]The Clean Water Act defines a "point source" to be any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. 33 U.S.C.S. § 1362(14).

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > Effluent Limitations
Environmental Law > Water Quality > Clean Water Act > Water Quality Standards
Real Property Law > Water Rights > Beneficial Use
[HN3]Under the Clean Water Act, the proper scope of the controls in a National Pollution Discharge Elimination System (NPDES) permit depends on the applicable state water quality standards for the affected water bodies. Each state is required to develop water quality standards that establish the desired condition of a waterway. A water quality standard for any given water segment has two components: (1) the designated beneficial uses of the water body; and (2) the water quality criteria sufficient to protect those uses. As enacted in 1972, the Act mandated that an NPDES permit require compliance with state water quality standards and that this goal be met by setting forth a specific "effluent limitation," which is a restriction on the amount of pollutants that may be discharged at the point source. 33 U.S.C.S. §§ 1311, 1362(11).

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > Storm Water Discharges
Environmental Law > Water Quality > Clean Water Act > Water Quality Standards
Governments > Local Governments > Licenses
[HN4]In 1987, Congress amended the Clean Water Act to add provisions that specifically concerned National Pollution Discharge Elimination System (NPDES) permit requirements for storm sewer discharges. 33 U.S.C.S. § 1342(p). In these amendments, enacted as part of the Water Quality Act of 1987, Congress distinguished between industrial and municipal storm water discharges. With respect to municipal storm water discharges, Congress clarified that the Environmental Protection Agency had the authority to fashion NPDES permit requirements to meet water quality standards without specific numerical effluent limits and instead to impose controls to reduce the discharge of pollutants to the maximum extent practicable. 33 U.S.C.S. § 1342(p)(3)(B)(iii).

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > Storm Water Discharges
[HN5]See 33 U.S.C.S. § 1342(p)(3)(B)(iii).

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > Effluent Limitations
[HN6]See Cal. Water Code § 13377.

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > Effluent Limitations
Real Property Law > Water Rights > Beneficial Use
[HN7]See Cal. Water Code § 13374.

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > Public Participation
Governments > Local Governments > Licenses
[HN8]The waste discharge requirements issued by the regional water boards ordinarily also serve as National Pollution Discharge Elimination System permits under federal law. Cal. Water Code § 13374.

Administrative Law > Judicial Review > Reviewability > Standing
Civil Procedure > Remedies > Writs > Common Law Writs > Mandamus
Environmental Law > Water Quality > General Overview
[HN9]See Cal. Water Code § 13330(b).

Administrative Law > Judicial Review > Reviewability > Standing
Civil Procedure > Remedies > Writs > Common Law Writs > Mandamus
Evidence > Inferences & Presumptions > Presumption of Regularity
[HN10]Where a party has been aggrieved by a final decision of a regional water board for which the California Water Resources Control Board denies review, Cal. Code Civ. Proc. § 1094.5 governs the writ of mandate proceedings, and the superior court must exercise its independent judgment in examining the evidence and resolving factual disputes. Cal. Water Code § 13330(d). In exercising its independent judgment, a trial court must afford a strong presumption of correctness concerning the administrative findings, and the party challenging the administrative decision bears the burden of convincing the court that the administrative findings are contrary to the weight of the evidence.

Administrative Law > Judicial Review > Administrative Record > General Overview
Administrative Law > Judicial Review > Standards of Review > Substantial Evidence
Civil Procedure > Appeals > Standards of Review > De Novo Review
[HN11]In reviewing the trial court's factual determinations on the administrative record, an appellate court applies a substantial evidence standard. However, in reviewing the trial court's legal determinations, an appellate court conducts a de novo review. Thus, the appellate court is not bound by the legal determinations made by the state or regional agencies or by the trial court, but it must give appropriate consideration to an administrative agency's expertise underlying its interpretation of an applicable statute.

Environmental Law > Water Quality > General Overview
[HN12]It is well settled that the Clean Water Act authorizes states to impose water quality controls that are more stringent than are required under federal law, 33 U.S.C.S. § 1370, and California law specifically allows the imposition of controls more stringent than federal law, Cal. Water Code § 13377.

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > Storm Water Discharges
[HN13]The language of 33 U.S.C.S. § 1342(p)(3)(B)(iii) does communicate the basic principle that the Environmental Protection Agency (and/or a state approved to issue a National Pollution Discharge Elimination System permit) retains the discretion to impose "appropriate" water pollution controls in addition to those that come within the definition of "maximum extent practicable."

Governments > Legislation > Interpretation
[HN14]While punctuation and grammar should be considered in interpreting a statute, neither is controlling unless the result is in harmony with the clearly expressed intent of the legislature. If the statutory language is susceptible to more than one reasonable interpretation, a court must also look to a variety of extrinsic aids, including the ostensible objects to be achieved, the evils to be remedied, the legislative history, public policy, contemporaneous administrative construction, and the statutory scheme of which the statute is a part.

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > Effluent Limitations
Environmental Law > Water Quality > Clean Water Act > Water Quality Standards
Governments > Public Improvements > General Overview
[HN15]With respect to National Pollution Discharge Elimination System (NPDES) permits, the legislative purpose underlying the Water Quality Act of 1987, and 33 U.S.C.S. § 1342(p) in particular, supports that Congress intended to provide the Environmental Protection Agency (or the regulatory agency of an approved state) the discretion to require compliance with water quality standards in a municipal storm sewer NPDES permit, particularly where that compliance will be achieved primarily through an iterative process.

Administrative Law > Judicial Review > Standards of Review > Statutory Interpretation
Governments > Legislation > Interpretation
[HN16]A court is required to give substantial deference to an administrative interpretation of a statute.

Civil Procedure > Appeals > Standards of Review > Reversible Errors
Evidence > Inferences & Presumptions > General Overview
[HN17]All judgments and orders are presumed correct, and persons challenging them must affirmatively show reversible error.

Civil Procedure > Appeals > Briefs
[HN18]A party challenging the sufficiency of evidence to support a judgment must summarize (and cite to) all of the material evidence, not just the evidence favorable to his or her appellate positions.

Administrative Law > Judicial Review > Standards of Review > Abuse of Discretion
Environmental Law > Water Quality > Clean Water Act > Water Quality Standards
[HN19]The party challenging the scope of an administrative permit has the burden of showing the agency abused its discretion or its findings were unsupported by the facts.

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > Storm Water Discharges
[HN20]BAT is an acronym for "best available technology economically achievable," which is a technology-based standard for industrial storm water dischargers that focuses on reducing pollutants by treatment or by a combination of treatment and best management practices.

SUMMARY:

CALIFORNIA OFFICIAL REPORTS SUMMARY

A building industry association filed an administrative appeal with the State Water Resources Control Board regarding the board's issuance of a comprehensive municipal storm sewer permit. The board denied the appeal. The association then petitioned for a writ of mandate, asserting numerous claims. Three environmental groups intervened as defendants. The trial court found the association failed to prove its claims. The association argued that the permit violated federal law because it allowed the state water board and a regional water board to impose municipal storm sewer control measures more stringent than a federal standard known as "maximum extent practicable" under 33 U.S.C. § 1342(p)(3)(B)(iii). (Superior Court of San Diego County, No. GIC 780263, Wayne L. Peterson, Judge.)

The Court of Appeal affirmed. The court held the language of § 1342(p)(3)(B)(iii) communicates the basic principle that the Environmental Protection Agency, and or a state approved to issue a National Pollution Discharge Elimination System (NPDES) permit, retains the discretion to impose "appropriate" water pollution controls in addition to those that come within the definition of "maximum extent practicable." The NPDES permit did not violate federal law. The water boards had the authority to include a permit provision requiring compliance with the more stringent state water quality standards. (Opinion by Haller, J., with Benke, Acting P. J., and Aaron, J., concurring.) [*867]

HEADNOTES

CALIFORNIA OFFICIAL REPORTS HEADNOTES
Classified to California Digest of Official Reports

(1) Pollution and Conservation Laws § 5--Water Pollution--Clean Water Act--Regulatory Permit--Municipal Storm Sewer Control Measures.--A regulatory permit issued by the State Water Resources Control Board allowing it and a regional water board to impose municipal storm sewer control measures more stringent than a federal standard known as "maximum extent practicable," set forth in 33 U.S.C. § 1342(p)(3)(B)(iii), did not violate federal law.

[4 Witkin, Summary of Cal. Law (9th ed. 1987) Real Property, § 69.]

(2) Pollution and Conservation Laws § 5--Water Pollution--Clean Water Act--NPDES Permits.--The Clean Water Act (33 U.S.C. 1251 et seq.) employs the basic strategy of prohibiting pollutant emissions from "point sources" unless the party discharging the pollutants obtains a National Pollution Discharge Elimination System (NPDES) permit. Pursuant to 33 U.S.C. § 1311(a), it is unlawful for any person to discharge a pollutant without obtaining a permit and complying with its terms. Pursuant to 33 U.S.C. § 1342(a) and (b) an NPDES permit is issued by the Environmental Protection Agency or by a state that has a federally-approved water quality program. Pursuant to 40 C.F.R. §§ 124.3, 124.6, 124.8, 124.10, before an NPDES is issued, the federal or state regulatory agency must follow an extensive administrative hearing procedure. Pursuant to 33 U.S.C. § 1342(b)(1)(B), NPDES permits are valid for five years.

(3) Pollution and Conservation Laws § 5--Water Pollution--Clean Water Act--NPDES Permits.--Under the Clean Water Act (33 U.S.C. § 1251 et seq.), the proper scope of the controls in a National Pollution Discharge Elimination System (NPDES) permit depends on the applicable state water quality standards for the affected

water bodies. Each state is required to develop water quality standards that establish the desired condition of a waterway. A water quality standard for any given water segment has two components: (1) the designated beneficial uses of the water body; and (2) the water quality criteria sufficient to protect those uses. As enacted in 1972, 33 U.S.C. §§ 1311, 1362(11) of the Act mandated that an NPDES permit require compliance with state water quality standards and that this goal be met by setting forth a specific "effluent limitation," which is a restriction on the amount of pollutants that may be discharged at the point source. [*868]

(4) Pollution and Conservation Laws § 5--Water Pollution--Clean Water Act--NPDES Permits.--In 1987, Congress amended the Clean Water Act (33 U.S.C. 1251 et seq.), to add provisions, specifically, 33 U.S.C. § 1342(p), that specifically concerned National Pollution Discharge Elimination System (NPDES) permit requirements for storm sewer discharges. In these amendments, enacted as part of the Water Quality Act of 1987 (33 U.S.C. § 251 et seq.), Congress distinguished between industrial and municipal storm water discharges. With respect to municipal storm water discharges, Congress clarified in 33 U.S.C. § 1342(p)(3)(B)(iii) that the Environmental Protection Agency had the authority to fashion NPDES permit requirements to meet water quality standards without specific numerical effluent limits and instead to impose controls to reduce the discharge of pollutants to the maximum extent practicable.

(5) Pollution and Conservation Laws § 5--Water Pollution--Waste Discharge Requirements.--Pursuant to Wat. Code, § 13374, the waste discharge requirements issued by the regional water boards ordinarily also serve as National Pollution Discharge Elimination System permits under federal law.

(6) Pollution and Conservation Laws § 5--Water Pollution--Writ of Mandate--Exercise of Independent Judgment.--Where a party has been aggrieved by a final decision of a regional water board for which the State Water Resources Control Board denies review, Code Civ. Proc., § 1094.5, governs the writ of mandate proceedings, and the superior court must, pursuant to Wat. Code, § 13330, subd. (d), exercise its independent judgment in examining the evidence and resolving factual disputes. In exercising its independent judgment, a trial court must afford a strong presumption of correctness concerning the administrative findings, and the party challenging the administrative decision bears the burden of convincing the court that the administrative findings are contrary to the weight of the evidence.

(7) Appellate Review § 144--Scope of Review--Questions of Law and Fact--Factual Determinations--Substantial Evidence Standard--De Novo Review.--In reviewing the trial court's factual determinations on the administrative record, an appellate court applies a substantial evidence standard. However, in reviewing the trial court's legal determinations, an appellate court conducts a de novo review. Thus, the appellate court is not bound by the legal determinations made by the state or regional agencies or by the trial court, but it must give appropriate consideration to an administrative agency's expertise underlying its interpretation of an applicable statute. [*869]

(8) Pollution and Conservation Laws § 5--Water Pollution--Clean Water Act--More Stringent State Controls.--It is well settled that the Clean Water Act (33 U.S.C. § 1251 et seq.) authorizes states to impose water quality controls that are more stringent than are required under federal law, 33 U.S.C. § 1370, and California law specifically allows the imposition of controls more stringent than federal law, Wat. Code, § 13377.

(9) Pollution and Conservation Laws § 5--Water Pollution--Clean Water Act--NPDES Permits.--The language of 33 U.S.C. § 1342(p)(3)(B)(iii) does communicate the basic principle that the Environmental Protection Agency (and/or a state approved to issue a National Pollution Discharge Elimination System permit) retains the discretion to impose "appropriate" water pollution controls in addition to those that come within the definition of "maximum extent practicable."

(10) Statutes § 21--Construction--Legislative Intent.--While punctuation and grammar should be considered in interpreting a statute, neither is controlling unless the result is in harmony with the clearly expressed intent of the Legislature. If the statutory language is susceptible to more than one reasonable interpretation, a court must also look to a variety of extrinsic aids, including the ostensible objects to be achieved, the evils to be remedied, the legislative history, public policy, contemporaneous administrative construction, and the statutory scheme of which the statute is a part.

(11) Pollution and Conservation Laws § 5--Water Pollution--Clean Water Act--NPDES Permits.--With respect to National Pollution Discharge Elimination System (NPDES) permits, the legislative purpose underlying the Water Quality Act of 1987 (33 U.S.C. § 251 et seq.), and 33 U.S.C. § 1342(p) in particular, supports that Congress intended to provide the Environmental Protection Agency (or the regulatory agency of an approved state) the discretion to require compliance with water quality standards in a municipal storm sewer NPDES

permit, particularly where that compliance will be achieved primarily through an iterative process.

(12) Statutes § 44--Construction--Administrative--Judicial Deference.--A court is required to give substantial deference to an administrative interpretation of a statute.

(13) Appellate Review § 135--Scope of Review--Presumptions.--All judgments and orders are presumed correct, and persons challenging them must affirmatively show reversible error. [*870]

(14) Appellate Review § 108--Briefs--Requisites--Reference to Record--Party Challenging Sufficiency of Evidence--Summarization of All Material Evidence Required.--A party challenging the sufficiency of evidence to support a judgment must summarize (and cite to) all of the material evidence, not just the evidence favorable to his or her appellate positions.

(15) Administrative Law § 116--Judicial Review and Relief--Scope of Review--Abuse of Discretion--Administrative Permit.--The party challenging the scope of an administrative permit has the burden of showing the agency abused its discretion or its findings were unsupported by the facts.

(16) Pollution and Conservation Laws § 5--Water Pollution--Industrial Storm Water Dischargers--Best Available Technology Economically Achievable.--BAT is an acronym for "best available technology economically achievable," which is a technology-based standard for industrial storm water dischargers that focuses on reducing pollutants by treatment or by a combination of treatment and best management practices.

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David S. Beckman, Heather L. Hoecherl, Anjali I. Jaiswal and Dan L. Gildor for Interveners and Respondents.

Marco Gonzalez for Intervener and Respondent San Diego BayKeeper.

Law Offices of Rory Wicks and Rory R. Wicks for Surfrider Foundation, Waterkeeper Alliance, The Ocean Conservancy, Heal the Bay, Environmental Defense Center, Santa Monica BayKeeper, Orange County CoastKeeper, Ventura CoastKeeper, Environmental Health Coalition, CalBeach Advocates, San Diego Audubon Society, Endangered Habitats League and Sierra Club as Amici Curiae on behalf [***2] of Defendants and Respondents and Interveners and Respondents.

JUDGES: Haller, J., with Benke, Acting P. J., and Aaron, J., concurring.

OPINION BY: HALLER [*871]

OPINION

[**130] **HALLER, J.**--This case concerns the environmental regulation of municipal storm sewers that carry excess water runoff to lakes, lagoons, rivers, bays, and the ocean. The waters flowing through these sewer systems have accumulated numerous harmful pollutants that are then discharged into the water body without receiving any treatment. To protect against the resulting water quality impairment, federal and state laws impose regulatory controls on storm sewer discharges. In particular, municipalities and other public entities are required to obtain, and comply with, a regulatory permit limiting the quantity and quality of water runoff that can be discharged from these storm sewer systems.

In this case, the California Regional Water Control Board, San Diego Region, (Regional Water Board) conducted numerous public hearings and then issued a comprehensive municipal storm sewer permit governing 19 local public entities. Although these entities did not bring an administrative challenge to the permit, one business organization, the Building Industry [***3] Association of San Diego County (Building Industry), filed an administrative appeal with the State Water Resources Control Board (State Water Board). After making some modifications to the permit, the State Water Board denied the appeal. Building Industry then petitioned for a writ of mandate in the superior court, asserting numerous claims, including that the permit violates state and federal law because the permit provisions are too stringent and impossible to satisfy. Three environmental groups intervened as defendants in the action. After a hearing, the trial court found Building Industry failed to prove its claims and entered judgment in favor of the administrative agencies (the Water Boards) and the intervener environmental groups.

(1) On appeal, Building Industry's main contention is that the regulatory permit violates federal law because it allows the Water Boards to impose municipal storm sewer control measures more stringent than a federal standard known as "maximum extent practicable." (33 U.S.C. § 1342(p)(3)(B)(iii).) [2] [**131] In the published

portion of this opinion, we reject this contention, and conclude the Water Boards had the authority to include [***4] a permit provision requiring compliance with state water quality standards. In the unpublished portion of the opinion, we find Building Industry's additional contentions to be without merit. We affirm the judgment.

2 Further statutory references are to title 33 of the United States Code, unless otherwise specified.

[*872] RELEVANT BACKGROUND INFORMATION

I. *Summary of Relevant Clean Water Act Provisions*

Before setting forth the factual background of this particular case, it is helpful to summarize the federal and state statutory schemes for regulating municipal storm sewer discharges. [3]

3 The systems that carry untreated urban water runoff to receiving water bodies are known as "[m]unicipal separate storm sewer" systems (40 C.F.R. § 122.26(b)(8)), and are often referred to as "MS4s" (40 C.F.R. § 122.30). For readability, we will identify these systems as municipal storm sewers. To avoid confusion in this case, we will generally use descriptive names, rather than initials or acronyms, when referring to parties and concepts.

[***5] A. *Federal Statutory Scheme*

When the United States Congress first enacted the Federal Water Pollution Control Act in 1948, the Congress relied primarily on state and local enforcement efforts to remedy water pollution problems. (*Middlesex Cty. Sewerage Auth. v. Sea Clammers* (1981) 453 U.S. 1, 11 [69 L. Ed. 2d 435, 101 S. Ct. 2615]; *Tahoe-Sierra Preservation Council v. State Water Resources Control Bd.* (1989) 210 Cal. App. 3d 1421, 1433 [259 Cal. Rptr. 132].) However, by the early 1970's, it became apparent that this reliance on local enforcement was ineffective and had resulted in the "accelerating environmental degradation of rivers, lakes, and streams ... ." (*Natural Resources Defense Council, Inc. v. Costle* (D.C. Cir. 1977) 568 F.2d 1369, 1371 (*Costle*); see *EPA v. State Water Resources Control Board* (1976) 426 U.S. 200, 203 [48 L. Ed. 2d 578, 96 S. Ct. 2022].) In response, in 1972 Congress substantially amended this law by mandating compliance with various minimum technological effluent standards established by the federal government and creating a comprehensive regulatory scheme to implement these laws. (See *EPA v. State Water Resources Control Board, supra*, 426 U.S. at pp. 204-205.) [***6] The objective of this law, now commonly known as the Clean Water Act, was to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." (§ 1251(a).)

[HN1](2) The Clean Water Act employs the basic strategy of prohibiting pollutant emissions from "point sources" [4] unless the party discharging the pollutants obtains a permit, known as an NPDES [5] permit. (See *EPA v. State Water Resources Control Board, supra*, 426 U.S. at p. 205.) It is "unlawful [*873] for any person to discharge a pollutant without obtaining a permit and complying with its terms." (*Ibid.*; see § 1311(a); *Costle, supra*, 568 [**132] F.2d at p. 1375.) An NPDES permit is issued by the United States Environmental Protection Agency (EPA) or by a state that has a federally approved water quality program. (§ 1342(a), (b); *EPA v. State Water Resources Control Board, supra*, 426 U.S. at p. 209.) Before an NPDES is issued, the federal or state regulatory agency must follow an extensive administrative hearing procedure. (See 40 C.F.R. §§ 124.3, 124.6, 124.8, 124.10; see generally Wardzinski et al., *National Pollutant Discharge Elimination System* [***7] *Permit Application and Issuance Procedures,* in The Clean Water Act Handbook (Evans edit., 1994) pp. 72-74 (Clean Water Act Handbook).) NPDES permits are valid for five years. (§ 1342(b)(1)(B).)

4 [HN2]The Clean Water Act defines a "point source" to be "any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged." (§ 1362(14).)

5 NPDES stands for National Pollution Discharge Elimination System.

[HN3](3) Under the Clean Water Act, the proper scope of the controls in an NPDES permit depends on the applicable state water quality standards for the affected water bodies. (See *Communities for a Better Environment v. State Water Resources Control Bd.* (2003) 109 Cal.App.4th 1089, 1092 [1 Cal. Rptr. 3d 76].) Each state is required to develop water quality standards that establish " 'the desired [***8] condition of a waterway.' " (*Ibid.*) A water quality standard for any given water segment has two components: (1) the designated beneficial uses of the water body; and (2) the water quality criteria sufficient to protect those uses. (*Ibid.*) As enacted in 1972, the Clean Water Act mandated that an NPDES permit require compliance with state water quality standards and that this goal be met by setting forth a specific "effluent limitation," which is a restriction on the

amount of pollutants that may be discharged at the point source. (§§ 1311, 1362(11).)

Shortly after the 1972 legislation, the EPA promulgated regulations exempting most municipal storm sewers from the NPDES permit requirements. (*Costle, supra,* 568 F.2d at p. 1372; see *Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d 1159, 1163 (*Defenders of Wildlife*).) When environmental groups challenged this exemption in federal court, the Ninth Circuit held a storm sewer is a point source and the EPA did not have the authority to exempt categories of point sources from the Clean Water Act's NPDES permit requirements. (*Costle, supra,* 568 F.2d at pp. 1374-1383.) [***9] The *Costle* court rejected the EPA's argument that effluent-based storm sewer regulation was administratively infeasible because of the variable nature of storm water pollution and the number of affected storm sewers throughout the country. (*Id.* at pp. 1377-1382.) Although the court acknowledged the practical problems relating to storm sewer regulation, the court found the EPA had the flexibility under the Clean Water Act to design regulations that would overcome these problems. (*Id.* at pp. 1379-1383.)

[*874] During the next 15 years, the EPA made numerous attempts to reconcile the statutory requirement of point source regulation with the practical problem of regulating possibly millions of diverse point source discharges of storm water. (*Defenders of Wildlife, supra,* 191 F.3d at p. 1163; see Gallagher, *Clean Water Act* in Environmental Law Handbook (Sullivan edit., 2003) p. 300 (Environmental Law Handbook); Eisen, *Toward a Sustainable Urbanism: Lessons from Federal Regulation of Urban Stormwater Runoff* (1995) 48 Wash. U. J. Urb. & Contemp. L. 1, 40-41 (*Regulation of Urban Stormwater Runoff*).)

(4) Eventually,[HN4] in 1987, Congress amended the [***10] Clean Water Act to add provisions that specifically concerned NPDES permit requirements for storm sewer discharges. (§ 1342(p); see *Defenders of Wildlife, supra,* [**133] 191 F.3d at p. 1163; *Natural Resources Defense Council v. U.S. E.P.A.* (1992) 966 F.2d 1292, 1296.) In these amendments, enacted as part of the Water Quality Act of 1987, Congress distinguished between industrial and municipal storm water discharges. With respect to *industrial* storm water discharges, Congress provided that NPDES permits "shall meet all applicable provisions of this section and section 1311 [requiring the EPA to establish effluent limitations under specific timetables] ... ." (§ 1342(p)(3)(A).) With respect to *municipal* storm water discharges, Congress clarified that the EPA had the authority to fashion NPDES permit requirements to meet water quality standards without specific numerical effluent limits and instead to impose "controls to reduce the discharge of pollutants to the maximum extent practicable ... ." (§ 1342(p)(3)(B)(iii); see *Defenders of Wildlife, supra,* 191 F.3d at p. 1163.) Because the statutory language pertaining to municipal [***11] storm sewers is at the center of this appeal, we quote the relevant portion of the statute in full:

"[HN5](B) ... Permits for discharges from municipal storm sewers--

"(i) may be issued on a system- or jurisdiction-wide basis;

"(ii) shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers; and

"(iii) shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants." (§ 1342(p)(3)(B).)To ensure this scheme would be administratively workable, Congress placed a moratorium on many new types of required stormwater permits until 1994 (§ 1342(p)(1)), and created a phased approach to necessary municipal [*875] stormwater permitting depending on the size of the municipality (§ 1342(p)(2)(D)). (See *Environmental Defense Center, Inc. v. U.S. E.P.A.* (9th Cir. 2003) 344 F.3d 832, 841-842.)

B. *State Statutory Scheme*

Three years before the 1972 Clean Water Act, the California Legislature enacted [***12] its own water quality protection legislation, the Porter-Cologne Water Quality Control Act (Porter-Cologne Act), seeking to "attain the highest water quality which is reasonable ... ." (Wat. Code, § 13000.) The Porter-Cologne Act created the State Water Board to formulate statewide water quality policy and established nine regional boards to prepare water quality plans (known as basin plans) and issue permits governing the discharge of waste. (Wat. Code, §§ 13100, 13140, 13200, 13201, 13240, 13241, 13243.) The Porter-Cologne Act identified these permits as "waste discharge requirements," and provided that the waste discharge requirements must mandate compliance with the applicable regional water quality control plan. (Wat. Code, §§ 13263, subd. (a), 13377, 13374.)

Shortly after Congress enacted the Clean Water Act in 1972, the California Legislature added chapter 5.5 to the Porter-Cologne Act, for the purpose of adopting the necessary federal requirements to ensure it would obtain EPA approval to issue NPDES permits. (Wat. Code, § 13370, subd. (c).) As part of these amendments, the Legislature provided that the state and regional water boards

"[HN6]shall, as required or authorized [***13] by the [Clean Water Act], issue waste discharge requirements ... which apply and ensure compliance with all applicable provisions [**134] [of the Clean Water Act], together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance." (Wat. Code, § 13377.) Water Code section 13374 provides that "[HN7][t]he term 'waste discharge requirements' as referred to in this division is the equivalent of the term 'permits' as used in the [Clean Water Act]."

(5) California subsequently obtained the required approval to issue NPDES permits. (*WaterKeepers Northern California v. State Water Resources Control Bd.* (2002) 102 Cal.App.4th 1448, 1453 [126 Cal. Rptr. 2d 389].) Thus, [HN8]the waste discharge requirements issued by the regional water boards ordinarily also serve as NPDES permits under federal law. (Wat. Code, § 13374.)

II. *The NPDES Permit at Issue in this Case*

Under its delegated authority and after numerous public hearings, in February 2001 the Regional Water Board issued a 52-page NPDES permit [*876] and Waste Discharge Requirements (the Permit) governing municipal storm sewers owned [***14] by San Diego County, the San Diego Unified Port District, and 18 San Diego-area cities (collectively, Municipalities). [6] The first 10 pages of the Permit contain the Regional Water Board's detailed factual findings. These findings describe the manner in which San Diego-area water runoff absorbs numerous harmful pollutants and then is conveyed by municipal storm sewers into local waters without any treatment. The findings state that these storm sewer discharges are a leading cause of water quality impairment in the San Diego region, endangering aquatic life and human health. The findings further state that to achieve applicable state water quality objectives, it is necessary not only to require municipalities to comply with existing pollution-control technologies, but also to require compliance with applicable "receiving water limits" (state water quality standards) and to employ an "iterative process" of "development, implementation, monitoring, and assessment" to improve existing technologies.

6 Under the Clean Water Act, entities responsible for NPDES permit conditions pertaining to their own discharges are referred to as "copermittees." (40 C.F.R. § 122.26(b)(1).) For clarity and readability, we shall refer to these entities as Municipalities.

[***15] Based on these factual findings, the Regional Water Board included in the Permit several overall prohibitions applicable to municipal storm sewer discharges. Of critical importance to this appeal, these prohibitions concern two categories of restrictions. First, the Municipalities are prohibited from discharging those pollutants "which have not been reduced to the *maximum extent practicable* ... ." [7] (Italics added). Second, the Municipalities [**135] are prohibited from discharging pollutants "which cause or contribute to exceedances of receiving water quality objectives ... " and/or that "cause or contribute to the violation of water quality standards ... ." This second category of restrictions (referred to in this opinion as the Water Quality Standards provisions) essentially provide that a municipality may not discharge pollutants if those pollutants would cause the receiving water body to exceed the applicable water quality standard. It is these latter restrictions that are challenged by Building Industry in this appeal.

7 The Permit does not precisely define this phrase, and instead, in its definition section, contains a lengthy discussion of the variable nature of the maximum extent practicable concept, referred to as MEP. A portion of this discussion is as follows: "[T]he definition of MEP is dynamic and will be defined by the following process over time: municipalities propose their definition of MEP by way of their [local storm sewer plan]. Their total collective and individual activities conducted pursuant to the [plan] becomes their proposal for MEP as it applies both to their overall effort, as well as to specific activities (e.g., MEP for street sweeping, or MEP for municipal separate storm sewer maintenance). In the absence of a proposal acceptable to the [Regional Water Board], the [Regional Water Board] defines MEP." The definition also identifies several factors that are "useful" in determining whether an entity has achieved the maximum extent practicable standard, including "Effectiveness," "Regulatory Compliance," "Public Acceptance," "Cost," and "Technical Feasibility."

[***16] [*877] Part C of the Permit (as amended) qualifies the Water Quality Standards provisions by detailing a procedure for enforcing violations of those standards through a step-by-step process of "timely implementation of control measures ...," known as an "iterative" process. Under this procedure, when a municipality "caus[es] or contribute[s] to an exceedance of an applicable water quality standard," the municipality must prepare a report documenting the violation and describing a process for improvement and prevention of further violations. The municipality and the regional water board must then work together at improving methods and monitoring progress to achieve compliance. But the final provision of Part C states that "Nothing in this section

shall prevent the [Regional Water Board] from enforcing any provision of this Order while the [municipality] prepares and implements the above report."

In addition to these broad prohibitions and enforcement provisions, the Permit requires the Municipalities to implement, or to require businesses and residents to implement, various pollution control measures referred to as "best management practices," which reflect techniques for preventing, [***17] slowing, retaining or absorbing pollutants produced by stormwater runoff. These best management practices include structural controls that minimize contact between pollutants and flows, and nonstructural controls such as educational and public outreach programs. The Permit also requires the Municipalities to regulate discharges associated with new development and redevelopment and to ensure a completed project will not result in significantly increased discharges of pollution from storm water runoff.

III. *Administrative and Trial Court Challenges*

After the Regional Water Board issued the Permit, the Building Industry, an organization representing the interests of numerous construction-related businesses, filed an administrative challenge with the State Water Board. Although none of the Municipalities joined in the administrative appeal, Building Industry claimed its own independent standing based on its assertion that the Permit would impose indirect obligations on the regional building community. (See Wat. Code, § 13320 [permitting any "aggrieved person" to challenge regional water board action].) Among its numerous contentions, Building Industry argued that the Water [***18] Quality Standards provisions in the Permit require strict compliance with state water quality standards beyond what is "practicable" and therefore violate federal law.

In November 2001, the State Water Board issued a written decision rejecting Building Industry's appeal after making certain modifications to the Permit. (Cal. Wat. Resources Control Bd. Order WQ2001-15 (Nov. 15, 2001).) Of particular relevance here, the State Water [*878] Board modified the Permit to make clear that the iterative enforcement process applied to the Water Quality Standards provisions in the Permit. But the State Water Board did not delete the Permit's [**136] provision stating that the Regional Water Board retains the authority to enforce the Water Quality Standards provisions even if a Municipality is engaged in this iterative process.

Building Industry then brought a superior court action against the Water Boards, challenging the Regional Board's issuance of the Permit and the State Water Board's denial of Building Industry's administrative challenge. [8] Building Industry asserted numerous legal claims, including that the Water Boards: (1) violated the Clean Water Act by imposing a standard greater [***19] than the "maximum extent practicable" standard; (2) violated state law by failing to consider various statutory factors before issuing the Permit; (3) violated the California Environmental Quality Act (CEQA) by failing to prepare an environmental impact report (EIR); and (4) made findings that were factually unsupported.

8 Several other parties were also named as petitioners: Building Industry Legal Defense Foundation, California Business Properties Association, Construction Industry Coalition for Water Quality, San Diego County Fire Districts Association, and the City of San Marcos. However, because these entities were not parties in the administrative challenge, the superior court properly found they were precluded by the administrative exhaustion doctrine from challenging the administrative agencies' compliance with the federal and state water quality laws. Although these entities were named as appellants in the notice of appeal, they are barred by the exhaustion doctrine from asserting appellate contentions concerning compliance with federal and state water quality laws. However, as to any other claims (such as CEQA), these entities are proper appellants. For ease of reference and where appropriate, we refer to the appellants collectively as Building Industry.

Three environmental organizations, San Diego BayKeeper, Natural Resources Defense Council, and California CoastKeeper (collectively, Environmental Organizations), [***20] requested permission to file a complaint in intervention, seeking to uphold the Permit and asserting a direct and substantial independent interest in the subject of the action. Over Building Industry's objections, the trial court permitted these organizations to file the complaint and enter the action as parties-interveners.

After reviewing the lengthy administrative record and the parties' briefs, and conducting an oral hearing, the superior court ruled in favor of the Water Boards and Environmental Organizations (collectively, respondents). Applying the independent judgment test, the court found Building Industry failed to meet its burden to establish the State Water Board abused its discretion in approving the Permit or that the administrative findings are contrary to the weight of the evidence. In particular, the court found Building Industry failed to establish the Permit requirements were "impracticable under federal law or unreasonable under state law," and noted that there was evidence showing the Regional Water Board considered many practical aspects of the regulatory [*879] controls

before issuing the Permit. Rejecting Building Industry's legal arguments, the court also stated that [***21] under federal law the Water Boards had the discretion "to require strict compliance with water quality standards" or "to require less than strict compliance with water quality standards." The court also sustained several of respondents' evidentiary objections, including to documents relating to the legislative history of the Clean Water Act.

Building Industry appeals, challenging the superior court's determination that the Permit did not violate the federal Clean Water Act. In its appeal, Building Industry does not reassert its claim that the Permit violates state law, except for its contentions pertaining to CEQA.

DISCUSSION

I. *Standard of Review*

[HN9](6) A party aggrieved by a final decision of the State Water Board may obtain review of the decision by filing a timely [**137] petition for writ of mandate in the superior court. (Wat. Code, § 13330, subd. (a).) [HN10]Code of Civil Procedure section 1094.5 governs the proceedings, and the superior court must exercise its independent judgment in examining the evidence and resolving factual disputes. (Wat. Code, § 13330, subd. [***22] (d).) "In exercising its independent judgment, a trial court must afford a strong presumption of correctness concerning the administrative findings, and the party challenging the administrative decision bears the burden of convincing the court that the administrative findings are contrary to the weight of the evidence." (*Fukuda v. City of Angels* (1999) 20 Cal.4th 805, 817 [85 Cal. Rptr. 2d 696, 977 P.2d 693].)

[HN11](7) In reviewing the trial court's factual determinations on the administrative record, a Court of Appeal applies a substantial evidence standard. (*Fukuda v. City of Angels, supra*, 20 Cal.4th at p. 824.) However, in reviewing the trial court's legal determinations, an appellate court conducts a de novo review. (See *Alliance for a Better Downtown Millbrae v. Wade* (2003) 108 Cal.App.4th 123, 129 [133 Cal. Rptr. 2d 249].) Thus, we are not bound by the legal determinations made by the state or regional agencies or by the trial court. (See *Yamaha Corp. of America v. State Bd. of Equalization* (1998) 19 Cal.4th 1, 7-8 [78 Cal. Rptr. 2d 1, 960 P.2d 1031].) But we must give appropriate consideration to an administrative agency's expertise underlying its interpretation of an applicable statute. [9] (*Ibid.*)

> 9 We note that in determining the meaning of the Clean Water Act and its amendments, federal courts generally defer to the EPA's statutory construction if the disputed portion of the statute is ambiguous. (See *Chevron U.S.A. v. Natural Res. Def. Council, Inc.* (1984) 467 U.S. 837, 842-844 [81 L. Ed. 2d 694, 104 S. Ct. 2778] (*Chevron*).) However, the parties do not argue this same principle applies to a *state agency's* interpretation of the Clean Water Act. Nonetheless, under governing state law principles, we do consider and give due deference to the Water Boards' statutory interpretations in this case. (See *Yamaha Corp. of America v. State Bd. of Equalization, supra*, 19 Cal.4th at pp. 7-8.)

[***23]

[*880] II. *Water Boards' Authority to Enforce Water Quality Standards in NPDES Permit*

Building Industry's main appellate contention is very narrow. Building Industry argues that two provisions in the Permit (the Water Quality Standards provisions) violate federal law because they prohibit the Municipalities from discharging runoff from storm sewers if the discharge would cause a water body to exceed the applicable water quality standard established under state law. [10] Building Industry contends that under federal law the "maximum extent practicable" standard is the "exclusive" measure that may be applied to municipal storm sewer discharges and a regulatory agency may not require a Municipality to comply with a state water quality standard if the required controls exceed a "maximum extent practicable" standard.

> 10 These challenged Permit provisions state "Discharges from [storm sewers] which cause or contribute to exceedances of receiving water quality objectives for surface water or groundwater are prohibited" (Permit, § A.2), and "Discharges from [storm sewers] that cause or contribute to the violation of water quality standards ... are prohibited" (Permit, § C.1).

[***24] In the following discussion, we first reject respondents' contentions that Building Industry waived these arguments by failing to raise a substantial evidence challenge to the court's factual findings and/or [**138] to reassert its state law challenges on appeal. We then focus on the portion of the Clean Water Act (§ 1342(p)(3)(B)(iii)) that Building Industry contends is violated by the challenged Permit provisions. On our de novo review of this legal issue, we conclude the Permit's Water Quality Standards provisions are proper under federal law, and Building Industry's legal challenges are unsupported by the applicable statutory language, legislative purpose, and legislative history.

A. *Building Industry Did Not Waive the Legal Argument*

Respondents (the Water Boards and Environmental Organizations) initially argue that Building Industry waived its right to challenge the Permit's consistency with the maximum extent practicable standard because Building Industry did not challenge the trial court's *factual* findings that Building Industry failed to prove any of the Permit requirements were "impracticable" or "unreasonable."

In taking this position, respondents misconstrue the [***25] nature of Building Industry's appellate contention challenging the Water Quality Standards provisions. Building Industry's contention concerns the scope of the authority given to the Regional Water Board under the Permit terms. Specifically, [*881] Building Industry argues that the Regional Water Board does not have the authority to require the Municipalities to adhere to the applicable water quality standards because federal law provides that the "maximum extent practicable" standard is the exclusive standard that may be applied to storm sewer regulation. This argument--concerning the proper scope of a regulatory agency's authority--presents a purely legal issue, and is not dependent on the court's factual findings regarding the practicality of the specific regulatory controls identified in the Permit.

Respondents alternatively contend that Building Industry waived its right to challenge the propriety of the Water Quality Standards provisions under federal law because the trial court found the provisions were valid under state law and Building Industry failed to reassert its state law challenges on appeal. Under the particular circumstances of this case, we conclude Building Industry did [***26] not waive its rights to challenge the Permit under federal law.

(8) Although[HN12] it is well settled that the Clean Water Act authorizes states to impose water quality controls that are more stringent than are required under federal law (§ 1370; see *PUD No. 1 of Jefferson Cty. v. Washington Dept. of Ecology* (1994) 511 U.S. 700, 705 [128 L. Ed. 2d 716, 114 S. Ct. 1900]; *Northwest Environmental Advocates v. Portland* (9th Cir. 1995) 56 F.3d 979, 989), and California law specifically allows the imposition of controls more stringent than federal law (Wat. Code, § 13377), the Water Boards made a tactical decision in the superior court to assert the Permit's validity based solely on federal law, and repeatedly made clear they were not seeking to justify the Permit requirements based on the Boards' independent authority to act under state law. On appeal, the Water Boards continue to rely primarily on federal law to uphold the Permit requirements, and their assertions that we may decide the matter based solely on state law are in the nature of asides rather than direct arguments. On this record, it would be improper to rely solely on state law to uphold the challenged Permit provisions. [***27]

B. *The Water Quality Standards Requirement Does Not Violate Federal Law*

We now turn to Building Industry's main substantive contention on appeal-- [**139] that the Permit's Water Quality Standards provisions (fn. 10, *ante*) violate federal law. Building Industry's contention rests on its interpretation of the 1987 Water Quality Act amendments containing NPDES requirements for municipal storm sewers. The portion of the relevant statute reads: "(B) ... Permits for discharges from municipal storm sewers ... [¶] ... [¶] (iii) shall require controls to reduce the discharge of pollutants to the *maximum extent practicable, including* management practices, control techniques and [*882] system, design and engineering methods, and such other provisions as the [EPA] Administrator or the State determines appropriate for the control of such pollutants." (§ 1342(p)(3)(B)(iii), italics added.)

1. *Statutory Language*

Focusing on the first 14 words of subdivision (iii), Building Industry contends the statute means that the maximum extent practicable standard sets the upper limit on the type of control that can be used in an NPDES permit, and that each of the phrases following the [***28] word "*including*" identify examples of "maximum extent practicable" controls. (§ 1342(p)(3)(B)(iii), italics added.) Building Industry thus reads the final "and such other provisions" clause as providing the EPA with the authority only to include *other* types of "maximum extent practicable" controls in an NPDES storm sewer permit.

Respondents counter that the term "including" refers only to the three identified types of pollution control procedures--(1) "management practices"; (2) "control techniques"; and (3) "system, design and engineering methods"--and that the last phrase, "*and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants*," provides the EPA (or the approved state regulatory agency) the specific authority to go beyond the maximum extent practicable standard to impose effluent limitations or water-quality based standards in an NPDES permit. In support, respondents argue that because the word "system" in section 1342(p)(3)(B)(iii) is singular, it necessarily follows from parallel-construction grammar principles that the word "system" is part of the phrase "system, design and engineering methods" rather [***29] than the phrase "control techniques and system." Under this view and given the absence of a comma after the word "techniques," respondents argue that the "and such other provisions" clause cannot be fairly read as restricted by the "maximum extent practicable" phrase, and instead the "and such other provisions" clause is a separate and dis-

tinct clause that acts as a second direct object to the verb "require" in the sentence. (§ 1342(p)(3)(B)(iii).)

Building Industry responds that respondents' proposed statutory interpretation is "not logical" because if the "and such other provisions" phrase is the direct object of the verb "require," the sentence would not make sense. Building Industry states that "permits" do not generally "require" provisions; they "include" or "contain" them.

(9) As a matter of grammar and word choice, respondents have the stronger position. The second part of Building Industry's proposed interpretation--"control techniques and system, design and engineering methods"--without a comma after the word "techniques" does not logically serve as a [*883] parallel construct with the "and such other provisions" clause. Moreover, we disagree that the "and such other provisions" [***30] clause cannot be a direct object to the word "require." (§ 1342(p)(3)(B)(iii).) Although it is not the clearest way of articulating the concept, [HN13]the language of section 1342(p)(3)(B)(iii) does communicate the [**140] basic principle that the EPA (and/or a state approved to issue the NPDES permit) retains the discretion to impose "appropriate" water pollution controls in addition to those that come within the definition of " 'maximum extent practicable.' " (*Defenders of Wildlife, supra,* 191 F.3d at pp. 1165-1167.) We find unpersuasive Building Industry's reliance on several statutory interpretation concepts, *ejusdem generis, noscitur a sociis*, and *expressio unius est exclusion alterius*, to support its narrower statutory construction.

2. *Purpose and History of Section 1342(p)(3)(B)(iii)*

(10) Further, "[HN14][w]hile punctuation and grammar should be considered in interpreting a statute, neither is controlling unless the result is in harmony with the clearly expressed intent of the Legislature." (*In re John S.* (2001) 88 Cal.App.4th 1140, 1144, fn. 1 [106 Cal. Rptr. 2d 476]; see *Estate of Coffee* (1941) 19 Cal.2d 248, 251 [120 P.2d 661].) If the statutory language is susceptible [***31] to more than one reasonable interpretation, a court must also "look to a variety of extrinsic aids, including the ostensible objects to be achieved, the evils to be remedied, the legislative history, public policy, contemporaneous administrative construction, and the statutory scheme of which the statute is a part." (*Nolan v. City of Anaheim* (2004) 33 Cal.4th 335, 340 [14 Cal. Rptr. 3d 857, 92 P.3d 350].)

[HN15](11) The legislative purpose underlying the Water Quality Act of 1987, and section 1342(p) in particular, supports that Congress intended to provide the EPA (or the regulatory agency of an approved state) the discretion to require compliance with water quality standards in a municipal storm sewer NPDES permit, particularly where, as here, that compliance will be achieved primarily through an iterative process.

Before section 1342(p) was enacted, the courts had long recognized that the EPA had the authority to require a party to comply with a state water quality standard even if that standard had not been translated into an effluent limitation. (See *EPA v. State Water Resources Control Board, supra,* 426 U.S. at p. 205, fn. 12; *PUD No. 1 of Jefferson Cty. v. Washington Dept. of Ecology, supra,* 511 U.S. at p. 715; [***32] *Northwest Environmental Advocates v. Portland* (9th Cir. 1995) 56 F.3d 979, 987; *Natural Resources Defense Council v. U.S.E.P.A.* (9th Cir. 1990) 915 F.2d 1314, 1316.) Specifically, section 1311(b)(1)(C) gave the regulatory agency the authority to impose "any more stringent limitation, including those necessary to meet water quality standards," and section 1342(a)(2) provided that "[t]he [EPA] Administrator shall [*884] prescribe conditions for [NPDES] permits to assure compliance" with requirements identified in section 1342(a)(1), which encompass state water quality standards. The United States Supreme Court explained that when Congress enacted the 1972 Clean Water Act, it retained "[w]ater quality standards ... as a supplementary basis for effluent limitations, ... so that numerous point sources despite individual compliance with effluent limitations, may be further regulated to prevent water quality from falling below acceptable levels. ... " (*EPA v. State Water Resources Control Board, supra,* 426 U.S. at p. 205, fn. 12; see also *Arkansas v. Oklahoma* (1992) 503 U.S. 91, 101 [117 L. Ed. 2d 239, 112 S. Ct. 1046].)

There [***33] is nothing in section 1342(p)(3)(B)(iii)'s statutory language or legislative history showing that Congress intended to eliminate this discretion when it amended the Clean Water Act in 1987. [**141] To the contrary, Congress added the NPDES storm sewer requirements to strengthen the Clean Water Act by making its mandate correspond to the practical realities of municipal storm sewer regulation. As numerous commentators have pointed out, although Congress was reacting to the physical differences between municipal storm water runoff and other pollutant discharges that made the 1972 legislation's blanket effluent limitations approach impractical and administratively burdensome, the primary point of the legislation was to address these administrative problems while giving the administrative bodies the tools to meet the fundamental goals of the Clean Water Act in the context of stormwater pollution. (See *Regulation of Urban Stormwater Runoff, supra,* 48 Wash. U. J. Urb. & Contemp. L. at pp. 44-46; Environmental Law Handbook, *supra,* at p. 300; Clean Water Act Handbook, *supra,* at pp. 62-63.) In the 1987 congressional debates, the Senators and Representatives emphasized the need to prevent the widespread

and escalating problems [***34] resulting from untreated storm water toxic discharges that were threatening aquatic life and creating conditions dangerous to human health. (See Remarks of Sen. Durenberger, 133 Cong. Rec. 1279 (Jan. 14, 1987); Remarks of Sen. Chaffee, 133 Cong. Rec. S738 (daily ed. Jan 14, 1987); Remarks of Rep. Hammerschmidt, 133 Cong. Rec. 986 (Jan. 8, 1987); Remarks of Rep. Roe, 133 Cong. Rec. 1006, 1007 (Jan. 8, 1987); Remarks of Sen. Stafford, 132 Cong. Rec. 32381, 32400 (Oct. 16, 1986).) This legislative history supports that in identifying a maximum extent practicable standard Congress did not intend to substantively bar the EPA/state agency from imposing a more stringent water quality standard if the agency, based on its expertise and technical factual information and after the required administrative hearing procedure, found this standard to be a necessary and workable enforcement mechanism to achieving the goals of the Clean Water Act.

To support a contrary view, Building Industry relies on comments by Minnesota Senator David Durenberger during the lengthy congressional [*885] debates on the 1987 Water Quality Act amendments. [11] (132 Cong. Rec. 32400 (Oct. 16, 1986); 133 Cong. Rec. S752 (daily [***35] ed. Jan. 14, 1987.) In the cited portions of the Congressional Record, Senator Durenberger states that NPDES permits "shall require controls to reduce the discharge of pollutants to the maximum extent practicable. Such controls include management practices, control techniques and systems, design and engineering methods, and such other provisions, as the Administrator determines appropriate for the control of pollutants in the stormwater discharge." (*Ibid.*) When viewing these statements in context, it is apparent that the Senator was merely paraphrasing the words of the proposed statute and was not intending to address the issue of whether the maximum extent practicable standard was a regulatory ceiling or whether he believed the proposed amendments limited the EPA's existing discretion. [12]

11 We agree with Building Industry that the trial court's refusal to consider this legislative history on the basis that it was not presented to the administrative agencies was improper. However, this error was not prejudicial because we apply a de novo review standard in interpreting the relevant statutes.

[***36]

12 In the cited remarks, Senator Durenberger in fact expressed his dissatisfaction with the EPA's prior attempts to regulate municipal storm sewers. He pointed out, for example, that "[r]unoff from municipal separate storm sewers and industrial sites contain significant values of both toxic and conventional pollutants," and that despite the Clean Water Act's "clear directive," the EPA "has failed to require most stormwater point sources to apply for permits which would control the pollutants in their discharge." (133 Cong. Rec. 1274, 1279-1280 (daily ed. Jan. 14, 1987).)

[**142] Building Industry's reliance on comments made by Georgia Representative James Rowland, who participated in drafting the 1987 Water Quality Act amendments, is similarly unhelpful. During a floor debate on the proposed amendments, Representative Rowland noted that cities have "millions of" stormwater discharge points and emphasized the devastating financial burden on cities if they were required to obtain a permit for each of these points. (133 Cong. Rec. 522 (daily ed. Feb. 3, 1987).) Representative Rowland then explained [***37] that the amendments would address this problem by "allow[ing] communities to obtain far less costly single jurisdictionwide permits." (*Ibid.*) Viewed in context, these comments were directed at the need for statutory provisions permitting the EPA to issue jurisdiction-wide permits thereby preventing unnecessary administrative costs to the cities, and do not reflect a desire to protect cities from the cost of complying with strict water quality standards when deemed necessary by the regulatory agency.

3. *Interpretations by the EPA and Other Courts*

(12) Our conclusion that Congress intended section 1342(p)(3)(B)(iii) to provide the regulatory agency with authority to impose standards stricter than a "maximum extent practicable" standard is consistent with interpretations by [*886] the EPA and the Ninth Circuit. In its final rule promulgated in the Federal Register, the EPA construed section 1342(p)(3)(B)(iii) as providing the administrative agency with the authority to impose water-quality standard controls in an NPDES permit if appropriate under the circumstances. Specifically, the EPA stated this statutory provision requires "controls to reduce the discharge of pollutants to the [***38] maximum extent practicable, *and where necessary water quality-based controls ...* ." (55 Fed.Reg. 47990, 47994 (Nov. 16, 1990), italics added.) [HN16]We are required to give substantial deference to this administrative interpretation, which occurred after an extensive notice and comment period. (See *ibid.*; *Chevron, supra,* 467 U.S. at pp. 842-844.)

The only other court that has interpreted the "such other provisions" language of section 1342(p)(3)(B)(iii) has reached a similar conclusion. (*Defenders of Wildlife, supra,* 191 F.3d at pp. 1166-1167.) In *Defenders of Wildlife*, environmental organizations brought an action against the EPA, challenging provisions in an NPDES permit requiring several Arizona localities to adhere to

various best management practice controls without requiring numeric effluent limitations. (*Id.* at p. 1161.) The environmental organizations argued that section 1342(p) did not allow the EPA to issue NPDES permits without requiring strict compliance with effluent limitations. (*Defenders of Wildlife, supra*, at p. 1161.) Rejecting this argument, the Ninth Circuit found section 1342(p)(3)(B)(iii)'s statutory language "unambiguously [***39] demonstrates that Congress did not require [**143] municipal storm-sewer discharges to comply strictly" with effluent limitations. (*Defenders of Wildlife, supra*, at p. 1164.)

But in a separate part of the opinion, the *Defenders of Wildlife* court additionally rejected the reverse argument made by the affected municipalities (who were the interveners in the action) that "the EPA may not, under the [Clean Water Act], require strict compliance with state water-quality standards, through numerical limits or otherwise." (*Defenders of Wildlife, supra*, 191 F.3d at p. 1166.) The court stated: "Although Congress did not require municipal storm-sewer discharges to comply strictly with [numerical effluent limitations], § 1342(p)(3)(B)(iii) states that '[p]ermits for discharges from municipal storm sewers ... shall require ... *such other provisions as the Administrator ... determines appropriate for the control of such pollutants.*' (Emphasis added.) That provision gives the EPA discretion to determine what pollution controls are appropriate. ... [¶] *Under that discretionary provision, the EPA has the authority to determine that ensuring* [***40] *strict compliance with state water-quality standards is necessary to control pollutants.* The EPA also has the authority to require less than strict compliance with state water-quality standards ... . Under 33 U.S.C. § 1342(p)(3)(B)(iii), the EPA's choice to include either management practices or numeric limitations in the permits was within its discretion. [Citations.]" (*Defenders of Wildlife, supra*, 191 F.3d at pp. 1166-1167, second italics added.) Although dicta, this [*887] conclusion reached by a federal court interpreting federal law is persuasive and is consistent with our independent analysis of the statutory language. [13]

13 Building Industry's reliance on two other Ninth Circuit decisions to support a contrary statutory interpretation is misplaced. (See *Natural Res. Def. Council, Inc. v. U.S.E.P.A., supra*, 966 F.2d at p. 1308; *Environmental Defense Center, Inc. v. U.S. E.P.A.* (9th Cir. 2003) 344 F.3d 832.) Neither of these decisions addressed the issue of the scope of a regulatory agency's authority to exceed the maximum extent practicable standard in issuing NPDES permits for municipal storm sewers.

[***41] To support its interpretation of section 1342(p)(3)(B)(iii), Building Industry additionally relies on the statutory provisions addressing nonpoint source runoff (a diffuse runoff not channeled through a particular source), which were also part of the 1987 amendments to the Clean Water Act. (§ 1329.) In particular, Building Industry cites to section 1329(a)(1)(C), which states, "The Governor of each State shall ... prepare and submit to the [EPA] Administrator for approval, a report which ... [¶] ... [¶] describes the process ... for identifying best management practices and measures to control each [identified] category ... of nonpoint sources and ... to reduce, to the *maximum extent practicable*, the level of pollution resulting from such category ... ." (Italics added.) Building Industry argues that because this "nonpoint source" statutory language expressly identifies only the maximum extent practicable standard, we must necessarily conclude that Congress meant to similarly limit the storm sewer point source pollution regulations to the maximum extent practicable standard.

The logic underlying this analogy is flawed because the critical language in the [***42] two statutory provisions is different. In the nonpoint source statute, Congress chose to include only the maximum extent practicable standard (§ 1329(a)(1)(C)); whereas in the municipal storm sewer provisions, Congress elected to include the "and such other provisions" clause (§ 1342(p)(3)(B)(iii)). This difference leads to the reasonable inference that Congress had a different intent when it enacted the two statutory provisions. Moreover, because of a fundamental difference between point and nonpoint source pollution, Congress has historically treated the two types of pollution differently and has subjected each type to entirely different requirements. (See *Pronsolino v. Nastri* (9th Cir. 2002) 291 F.3d 1123, 1126-1127.) Given this different treatment, it would be improper to presume Congress intended to apply the same standard in both statutes. Building Industry's citation to comments during the 1987 congressional debates regarding nonpoint source regulation does [**144] not support Building Industry's contentions.

[*888] 4. *Contention that it is "Impossible" for Municipalities to Meet Water Quality Standards*

We also reject Building Industry's arguments woven throughout [***43] its appellate briefs, and emphasized during oral arguments, that the Water Quality Standards provisions violate federal law because compliance with those standards is "impossible." The argument is not factually or legally supported.

(13) First, there is no showing on the record before us that the applicable water quality standards are unattainable. The trial court specifically concluded that Building Industry failed to make a factual showing to

support this contention, and Building Industry does not present a proper appellate challenge to this finding sufficient to warrant our reexamining the evidence. [HN17]All judgments and orders are presumed correct, and persons challenging them must affirmatively show reversible error. **(14)** (*Walling v. Kimball* (1941) 17 Cal.2d 364, 373 [110 P.2d 58].) [HN18]A party challenging the sufficiency of evidence to support a judgment must summarize (and cite to) *all* of the material evidence, not just the evidence favorable to his or her appellate positions. (*In re Marriage of Fink* (1979) 25 Cal.3d 877, 887-888 [160 Cal. Rptr. 516, 603 P.2d 881]; *People v. Dougherty* (1982) 138 Cal. App. 3d 278, 282 [188 Cal. Rptr. 123].) Building Industry has made [***44] no attempt to comply with this well-established appellate rule in its briefs.

In a supplemental brief, Building Industry attempted to overcome this deficiency by asserting that "[t]he record clearly establishes that [the Water Quality Standards provisions] are unattainable during the period the permit is in effect." This statement, however, is not supported by the proffered citation or by the evidence viewed in the light most favorable to the respondents. Further, the fact that many of the Municipalities' storm sewer discharges currently violate water quality standards does not mean that the Municipalities cannot comply with the standards during the five-year term of the Permit. Additionally, Building Industry's assertions at oral argument that the trial court never reached the impossibility issue and/or that respondents' counsel conceded the issue below are belied by the record, including the trial court's rejection of Building Industry's specific challenge to the proposed statement of decision on this very point. [14]

> 14 Because we are not presented with a proper appellate challenge, we do not address the trial court's factual determinations in this case concerning whether it is possible or practical for a Municipality to achieve any specific Permit requirement.

[***45] **(15)** We reject Building Industry's related argument that it was respondents' burden to affirmatively show it is feasible to satisfy each of the applicable Water Quality Standards provisions. [HN19]The party challenging the scope of an administrative permit, such as an NPDES, has the burden of [*889] showing the agency abused its discretion or its findings were unsupported by the facts. (See *Fukuda v. City of Angels, supra*, 20 Cal.4th at p. 817; *Huntington Park Redevelopment Agency v. Duncan* (1983) 142 Cal. App. 3d 17, 25 [190 Cal. Rptr. 744].) Thus, it was not respondents' burden to affirmatively demonstrate it was possible for the Municipalities to meet the Permit's requirements.

Building Industry alternatively contends it was not required to challenge the facts underlying the trial court's determination that the Permit requirements were feasible [**145] because the court's determination was wrong as a matter of law. Specifically, Building Industry asserts that a Permit requirement that is more stringent than a "maximum extent practicable" standard is, by definition, "not practicable" and therefore "technologically impossible" to achieve under any circumstances. Building [***46] Industry relies on a dictionary definition of "practicable," which provides that the word means " 'something that can be done; feasible,' " citing the 1996 version of "Webster's Encyclopedic Unabridged Dictionary."

(16) This argument is unpersuasive. The federal maximum extent practicable standard is not defined in the Clean Water Act or applicable regulations, and thus the Regional Water Board properly included a detailed description of the term in the Permit's definitions section. (See *ante*, fn. 7.) As broadly defined in the Permit, the maximum extent practicable standard is a highly flexible concept that depends on balancing numerous factors, including the particular control's technical feasibility, cost, public acceptance, regulatory compliance, and effectiveness. This definition conveys that the Permit's maximum extent practicable standard is a term of art, and is not a phrase that can be interpreted solely by reference to its everyday or dictionary meaning. Further, the Permit's definitional section states that the maximum extent practicable standard "considers economics and is generally, but not necessarily, *less* stringent than BAT." (Italics added.) [HN20]BAT is an acronym [***47] for "best available technology economically achievable," which is a technology-based standard for industrial storm water dischargers that focuses on reducing pollutants by treatment or by a combination of treatment and best management practices. (See *Texas Oil & Gas Ass'n v. U.S. E.P.A.* (5th Cir. 1998) 161 F.3d 923, 928.) If the maximum extent practicable standard is generally "less stringent" than another Clean Water Act standard that relies on available technologies, it would be unreasonable to conclude that anything more stringent than the maximum extent practicable standard is necessarily impossible. In other contexts, courts have similarly recognized that the word "practicable" does not necessarily mean the most that can possibly be done. (See *Nat. Wildlife Federation v. Norton* (E.D.Cal. 2004) 306 F. Supp. 2d 920, 928, fn. 12 ["[w]hile the meaning of the term 'practicable' in the [Endangered Species Act] is not entirely clear, the term does not simply equate to 'possible' "]; *Primavera Familienstiftung v. Askin* (S.D.N.Y. 1998) 178 F.R.D. [*890] 405, 409 [noting that "impracticability does not mean impossibility, but rather difficulty [***48] or inconvenience"].)

We additionally question whether many of Building Industry's "impossibility" arguments are premature on the record before us. As we have explained, the record does not support that any required control is, or will be, impossible to implement. Further, the Permit allows the Regional Water Board to enforce water quality standards during the iterative process, but does not impose any obligation that the board do so. Thus, we cannot determine with any degree of certainty whether this obligation would ever be imposed, particularly if it later turns out that it is not possible for a Municipality to achieve that standard.

Finally, we comment on Building Industry's repeated warnings that if we affirm the judgment, all affected Municipalities will be in immediate violation of the Permit because they are not now complying with applicable water quality standards, subjecting them to immediate and substantial civil penalties, and leading to a potential "shut down" of public operations. These doomsday arguments are unsupported. The Permit makes clear that Municipalities [**146] are required to adhere to numerous specific controls (none of which are challenged in this case) and [***49] to comply with water quality standards through "timely implementation of control measures" by engaging in a cooperative iterative process where the Regional Water Board and Municipality work together to identify violations of water quality standards in a written report and then incorporate approved modified best management practices. Although the Permit allows the regulatory agencies to enforce the water quality standards during this process, the Water Boards have made clear in this litigation that they envision the ongoing iterative process as the centerpiece to achieving water quality standards. Moreover, the regulations provide an affected party reasonable time to comply with new permit requirements under certain circumstances. (See 40 C.F.R. § 122.47.) There is nothing in this record to show the Municipalities will be subject to immediate penalties for violation of water quality standards.

We likewise find speculative Building Industry's predictions that immediately after we affirm the judgment, citizens groups will race to the courthouse to file lawsuits against the Municipalities and seek penalties for violation of the Water Quality Standards provisions. [15] As noted, the applicable [***50] laws provide time for an affected entity to comply with new standards. Moreover, although we do not reach the enforcement issue in this case, we note the [*891] Permit makes clear that the iterative process is to be used for violations of water quality standards, and gives the Regional Water Board the discretionary authority to enforce water quality standards during that process. Thus, it is not at all clear that a citizen would have standing to compel a municipality to comply with a water quality standard despite an ongoing iterative process. (See § 1365(a)(1)(2).) [***51]

15 The Clean Water Act allows a citizen to sue a discharger to enforce limits contained in NPDES permits, but requires the citizen to notify the alleged violator, the state, and the EPA of its intention to sue at least 60 days before filing suit, and limits the enforcement to nondiscretionary agency acts. (See § 1365(a)(1)(2).)

III.-VII.* [NOT CERTIFIED FOR PUBLICATION]

* See footnote, *ante*, page 866.

DISPOSITION

Judgment affirmed. Appellants to pay respondents' costs on appeal.

Benke, Acting P. J., and Aaron, J., concurred.

A petition for a rehearing was denied January 4, 2005, and the opinion was modified to read as printed above. Appellants' petition for review by the Supreme Court was denied March 30, 2005. Baxter, J., and Brown, J., were of the opinion that the petition should be granted. [***52]

TAB "7"

LEXSEE

Warning
As of: Jun 25, 2010

CARMEL VALLEY FIRE PROTECTION DISTRICT et al., Plaintiffs and Respondents, v. THE STATE OF CALIFORNIA et al., Defendants and Appellants. RINCON DEL DIABLO MUNICIPAL WATER DISTRICT et al., Plaintiffs and Respondents, v. THE STATE OF CALIFORNIA et al., Defendants and Appellants. COUNTY OF LOS ANGELES, Plaintiff and Respondent, v. THE STATE OF CALIFORNIA et al., Defendants and Appellants

Nos. B006078, B011941, B011942

Court of Appeal of California, Second Appellate District, Division Five

190 Cal. App. 3d 521; 234 Cal. Rptr. 795; 1987 Cal. App. LEXIS 1266

February 19, 1987

SUBSEQUENT HISTORY: [***1] As Modified March 10, 1987. A petition for a rehearing was denied March 17, 1987, and appellants' petition for review by the Supreme Court was denied May 14, 1987. Eagleson, J., did not participate therein.

PRIOR HISTORY: Superior Court of Los Angeles County, No. C437471, Norman L. Epstein, Judge; No. C514623 and No. C515319, Jack T. Ryburn, Judge.

DISPOSITION: As modified, the judgment is affirmed. Respondents to recover costs on appeal.

CASE SUMMARY:

PROCEDURAL POSTURE: Appellant state challenged the judgments of the Superior Court of Los Angeles County (California), which ordered appellant to reimburse respondent county for state-mandated costs in three consolidated appeals.

OVERVIEW: Respondent county purchased protective clothing and equipment for firefighters within its employ as required by Cal. Code Regs. tit. 8, §§ 3401- 3409 (1978). Respondent argued that it was entitled to reimbursement from appellant state for these expenditures because they constituted a state-mandated "new program" or "higher level of service" under Cal. Rev. & Tax. Code §§ 2207 and 2231 and Cal. Const. art. XIII B, § 6. Respondent filed a test claim with the California Sate Board of Control (board) for these costs and the board determined that there was a state mandate and that respondent should have been reimbursed. Appellant did not seek judicial review of the decision and respondent filed a petition for writ of mandate and complaint for declaratory judgment. The trial court issued a writ of mandate and ordered appellant to pay the costs. On appeal, three cases were consolidated. The court affirmed with modifications and held that appellant had waived its right to challenge the board's findings and also was collaterally estopped from doing so. The court also held that the expenditures were pursuant to a new program within the meaning of Cal. Const. art. XIII B, § 6.

OUTCOME: The court affirmed the judgments, ordering appellant state to reimburse respondent county for state-mandated costs because appellant was collaterally estopped from challenging findings of the California State Board of Control and because the reimbursement was for a new program within the meaning of the California Constitution. The court modified the judgments primarily to command the comptroller to draw warrants if necessary.

CORE TERMS: reimbursement, appropriation, state-mandated, budget, local agencies, executive orders, appropriated, reimburse, mandated, offset, budget acts, fire fighters, industrial, complying, protective clothing, fire protection, new program, local governments, ex-

penditure, forfeitures, invalid, fines, collateral estoppel, single subject rule, writ of mandate, state mandate, mandamus, mandate to compel, order to provide, expended

LexisNexis(R) Headnotes

Governments > State & Territorial Governments > Finance
[HN1]See Cal. Rev. & Tax. Code § 2207.

Governments > State & Territorial Governments > Finance
[HN2]See Cal. Rev. & Tax. Code § 2231(a).

Governments > State & Territorial Governments > Finance
[HN3]See Cal. Const art. XIII B, § 6.

Governments > Local Governments > Finance
[HN4]The right to reimbursement is triggered when the local agency incurs costs mandated by the state in either complying with a new program or providing an increased level of service of an existing program. Cal. Rev. & Tax. §§ 2207, 2231.

Civil Procedure > Pleading & Practice > Defenses, Demurrers & Objections > Waiver & Preservation
[HN5]Waiver occurs where there is an existing right; actual or constructive knowledge of its existence; and either an actual intention to relinquish it, or conduct so inconsistent with an intent to enforce the right as to induce a reasonable belief that it has been waived. A right that is waived is lost forever. The doctrine of waiver applies to rights and privileges afforded by statute.

Administrative Law > Agency Adjudication > Decisions > Collateral Estoppel
Civil Procedure > Judgments > Preclusion & Effect of Judgments > Estoppel > Collateral Estoppel
[HN6]Collateral estoppel has been applied to bar relitigation of an issue decided in a prior court proceeding. In order for the doctrine to apply, the issues in the two proceedings must be the same, the prior proceeding must have resulted in a final judgment on the merits, and the same parties or their privies must be involved.

Administrative Law > Agency Adjudication > Decisions > Collateral Estoppel
Civil Procedure > Judgments > Preclusion & Effect of Judgments > Estoppel > Collateral Estoppel
Criminal Law & Procedure > Double Jeopardy > Collateral Estoppel
[HN7]The doctrine of collateral estoppel applies to a final adjudication of an administrative agency of statutory creation so as to preclude relitigation of the same issues in a subsequent criminal case. Collateral estoppel applies to such prior adjudications where three requirements are met: (1) the administrative agency acts in a judicial capacity; (2) it resolves disputed issues properly before it; and (3) all parties are provided with the opportunity to fully and fairly litigate their claims.

Administrative Law > Agency Adjudication > Hearings > General Overview
Governments > Local Governments > Administrative Boards
[HN8]The California State Board of Control (board) exercises quasi-judicial powers in adjudging the validity of claims against the State of California and is the sole administrative remedy available to local agencies seeking reimbursement for state-mandated costs. Cal. Rev. & Tax. Code § 2250. Board examiners have the power to administer oaths, examine witnesses, issue subpoenas, and receive evidence. Cal. Gov't Code § 13911. The hearings are adversarial in nature and allow for the presentation of evidence by claimant, the Department of Finance, and any other affected agency. Cal. Rev. & Tax. Code § 2252.

Civil Procedure > Judgments > Preclusion & Effect of Judgments > Estoppel > Collateral Estoppel
[HN9]The courts have held that the agents of the same government are in privity with each other, since they represent not their own rights but the right of the government.

Civil Procedure > Judgments > Preclusion & Effect of Judgments > Estoppel > Collateral Estoppel
[HN10]A prior judgment on a question of law decided by a court is conclusive in a subsequent action between the same parties where both causes involved arise out of the same subject matter or transaction, and where holding the judgment to be conclusive will not result in an injustice.

Administrative Law > Agency Adjudication > Decisions > Collateral Estoppel

Civil Procedure > Judgments > Preclusion & Effect of Judgments > Estoppel > Collateral Estoppel
Governments > Local Governments > Licenses
[HN11]There is no policy reason to limit the application of the collateral estoppel doctrine to successive court proceedings.

Administrative Law > Agency Adjudication > Decisions > Collateral Estoppel
Civil Procedure > Pleading & Practice > Defenses, Demurrers & Objections > Waiver & Preservation
Civil Procedure > Judgments > Preclusion & Effect of Judgments > Estoppel > Collateral Estoppel
[HN12]Questions of law decided by an administrative agency invoke the collateral estoppel doctrine only when a determination of conclusiveness will not work an injustice. Likewise, the doctrine of waiver is inapplicable if a litigant has no actual or constructive knowledge of his rights.

Governments > Local Governments > Duties & Powers
[HN13]Fire protection is a peculiarly governmental function. Police and fire protection are two of the most essential and basic functions of local government.

Governments > Legislation > Interpretation
[HN14]A different interpretation of a word in a statute must fall before a constitutional provision of similar import.

Governments > State & Territorial Governments > Finance
[HN15]Cal. Const. art. XIII B, § 6 and Cal. Rev. & Tax. Code §§ 2207, 2231 are not appropriations measures.

Governments > State & Territorial Governments > Employees & Officials
[HN16]See Cal. Const. art. III, § 3.

Governments > State & Territorial Governments > Finance
[HN17]See Cal. Const. art. XVI, § 7.

Governments > State & Territorial Governments > Finance
[HN18]Once funds have already been appropriated by legislative action, a court transgresses no constitutional principle when it orders the state controller or other similar official to make appropriate expenditures from such funds.

Constitutional Law > Separation of Powers
Governments > State & Territorial Governments > Finance
[HN19]As long as appropriated funds are reasonably available for the expenditures in question, the separation of powers doctrine poses no barrier to a judicial order directing the payment of such funds.

Governments > State & Territorial Governments > Finance
[HN20]The California Occupational Safety and Health Act, 1973 Cal. Stat. ch. 993 is modeled after federal law and is designed to assure safe working conditions for all California workers. A legislative disclaimer appears in 1973 Cal. Stat. ch. 993, § 106 at 1954.

Governments > State & Territorial Governments > Finance
[HN21]See 1973 Cal. Stat. ch. 993, § 106 at 1954.

Governments > State & Territorial Governments > Finance
[HN22]See 1974 Cal. Stat. ch. 1284, § 106 at 2787.

Governments > State & Territorial Governments > Finance
[HN23]See 1981 Cal. Stat. ch. 1090, § 3 at 4193.

Governments > State & Territorial Governments > Finance
[HN24]California Budget Acts of 1981, 1983, and 1984 prohibit encumbering appropriations to reimburse costs incurred under the executive orders, except under certain limited circumstances. 1981 Cal. Stat. ch. 99, § 28.40 at 606; 1983 Cal. Stat. ch. 324, § 26.00 at 1504; 1984 Cal. Stat. ch. 258, § 26.00.

Governments > Local Governments > Finance
Governments > State & Territorial Governments > Finance
[HN25]The concept of federally mandated costs has provided local agencies with a financial escape valve ever since passage of the Property Tax Relief Act of 1972 (Act), 1972 Cal. Stat. ch. 1406, § 1 at 2931. That Act limited local governments' power to levy property taxes,

while requiring that they be reimbursed by the state for providing compulsory increased levels of service or new programs. However, under Cal. Rev. & Tax. Code § 2271, costs mandated by the federal government are not subject to reimbursement and local governments are permitted to levy taxes in addition to the maximum property tax rate to pay such costs.

Governments > Local Governments > Finance
[HN26]The limitation on local government's ability to raise property taxes, and the duty of the state to reimburse for state-mandated costs, is a part of Cal. Const. art. XIII B, § 6, which directs state subvention similar in nature to that required by the preexisting provisions of Cal. Rev. & Tax. Code §§ 2207, 2231.

Governments > Local Governments > Finance
[HN27] Cal. Rev. & Tax. Code § 2206 defines nonreimbursable costs mandated by the federal government to include the following: costs resulting from enactment of a state law or regulation where failure to enact such law or regulation to meet specific federal program or service requirements would result in substantial monetary penalties or loss of funds to public or private persons in the state.

Governments > Legislation > Interpretation
[HN28]Interpretation of statutory language is purely a judicial function. Legislative declarations are not binding on the courts and are particularly suspect when they are the product of an attempt to avoid financial responsibility.

Governments > Legislation > Interpretation
[HN29]See Cal. Const. art. IV, § 9.

Governments > Legislation > Interpretation
[HN30]The single subject rule essentially requires that a statute have only one subject matter and that the subject be clearly expressed in the statute's title. The rule's primary purpose is to prevent "log-rolling" in the enactment of laws. This disfavored practice occurs where a provision unrelated to a bill's main subject matter and title is included in it with the hope that the provision will remain unnoticed and unchallenged. By invalidating these unrelated clauses, the single subject rule prevents the passage of laws which otherwise might not have passed had the legislative mind been directed to them. However, in order to minimize judicial interference in the legislature's activities, the single subject rule is to be construed liberally. A provision violates the rule only if it does not promote the main purpose of the act or does not have a necessary and natural connection with that purpose.

Governments > Legislation > Effect & Operation > Operability
Governments > Legislation > Effect & Operation > Retrospective Operation
[HN31]A retroactive statute is one that relates back to a previous transaction and gives that transaction a legal effect different from that which it had under the law when it occurred. Absent some clear policy requiring the contrary, statutes modifying liability in civil cases are not to be construed retroactively.

Governments > State & Territorial Governments > Finance
[HN32]See 1981 Cal. Stat. ch. 99, § 28.40 at 606; 1983 Cal. Stat. ch. 324, § 26 at 1504; 1984 Cal. Stat. ch. 258, § 26.00.

Governments > State & Territorial Governments > Finance
[HN33]Cal. Const. art. XIV, § 4 concerns the power to enact workers' compensation statutes and regulations. It does not focus on the issue of reimbursement for state-mandated costs, which is covered by Cal. Rev. & Tax. Code §§ 2207, 2231, and Cal. Const. art. XIII B, § 6. Since these latter provisions do not effect a pro tanto repeal of the legislature's plenary power over workers' compensation law, they do not conflict with Cal. Const. art. XIV, § 4.

Governments > State & Territorial Governments > Finance
[HN34]Under Cal. Const. art. XIII B, § 6(c), the legislature may reimburse mandates enacted prior to January 1, 1975, and must reimburse mandates passed after that date, but does not have to begin such reimbursement until the effective date of article XIII B which is July 1, 1980. In other words, the amendment of article XIII B, § 6(c) operates on "window period" mandates even though the reimbursement process may not actually commence until later.

Governments > Legislation > Statutes of Limitations > Time Limitations
Governments > State & Territorial Governments > Claims By & Against

[HN35] Cal. Civ. Proc. Code § 335 is a general introductory section to the statute of limitations for all matters except recovery of real property. Cal. Civ. Proc. Code § 338(1) requires an action upon a liability created by statute to be commenced within three years.

Administrative Law > Judicial Review > Reviewability > Exhaustion of Remedies
Civil Procedure > Justiciability > Exhaustion of Remedies > Administrative Remedies
Labor & Employment Law > Collective Bargaining & Labor Relations > Exhaustion of Remedies
[HN36]A claimant does not exhaust its administrative remedies and cannot come under the court's jurisdiction until the legislative process is complete.

Governments > Local Governments > Claims By & Against
[HN37]See Cal. Gov't Code § 17612(b).

Governments > State & Territorial Governments > Finance
[HN38]The remedy under Cal. Gov't Code § 17612 is purely a discretionary course of action. By using the permissive word "may," the legislature does not intend to override Cal. Const. art. XIII B, § 6 and Cal. Rev. & Tax. Code §§ 2207 and 2231. These constitutional and statutory imprimaturs each impose upon the state an obligation to reimburse for state-mandated costs. Once that determination is finally made, the state is under a clear and present ministerial duty to reimburse. In the absence of compliance, traditional mandamus lies. Cal. Civ. Proc. Code § 1085.

Governments > Legislation > Interpretation
[HN39]The Cal. Const. is supreme. Any statute in conflict therewith is invalid.

Governments > State & Territorial Governments > Finance
[HN40] Cal. Rev. & Tax. Code § 2255(c) cannot abrogate the constitutional directive to reimburse.

Civil Procedure > Trials > Jury Trials > Actions in Equity
Governments > State & Territorial Governments > Claims By & Against
[HN41]The right to offset is a long-established principle of equity. Either party to a transaction involving mutual debits and credits can strike a balance, holding himself owing or entitled only to the net difference. Although this doctrine exists independent of statute, its governing principle has been partially codified. Cal. Civ. Proc. Code § 431.70. The doctrine has been applied in favor of a local agency against the state.

Governments > State & Territorial Governments > Finance
[HN42]See Cal. Gov't Code § 12419.5.

Governments > State & Territorial Governments > Finance
[HN43]See Cal. Gov't Code § 16304.1.

Civil Procedure > Jurisdiction > Subject Matter Jurisdiction > Jurisdiction Over Actions > General Overview
Civil Procedure > Parties > Joinder > Necessary Parties
[HN44]See Cal. Civ. Proc. Code § 389(a).

Governments > Local Governments > Duties & Powers
[HN45]The Auditor Controller is an officer of the county and is subject to the direction and control of the county board of supervisors. Cal. Gov't Code §§ 24000(d), (e), 26880; L.A. County Code, § 2.10.010.

Civil Procedure > Remedies > Judgment Interest > General Overview
Governments > Local Governments > Finance
Governments > State & Territorial Governments > Claims By & Against
[HN46] Cal. Civ. Code § 3287(a) allows interest to any person entitled to recover damages certain, or capable of being made certain by calculation. Interest begins on the day that the right to recover vests in the claimant. By its own terms, this section applies to any judgment debtor, including the state or any political subdivision of the state.

Civil Procedure > Remedies > Judgment Interest > General Overview
[HN47]An invalid statute voluntarily enacted and promulgated by the state is not a defense to its obligation to pay interest under Cal. Civ. Code § 3287(a).

Civil Procedure > Appeals > Standards of Review > General Overview

[HN48]An appellate court is not limited by the interpretation of statutes given by the trial court.

Civil Procedure > Parties > Joinder > Necessary Parties
[HN49]Through the notion of privity, a government agent can be held in contempt for knowingly violating a court order issued against another agent of the same government.

Governments > Courts > Authority to Adjudicate
[HN50]An appellate court is empowered to add a directive that the trial court order be modified to include charging orders against funds appropriated by subsequent budget acts.

SUMMARY:

CALIFORNIA OFFICIAL REPORTS SUMMARY

The trial court, in separate proceedings brought by three counties against the state for reimbursement of funds expended by the counties in complying with a state order to provide protective clothing and equipment for county fire fighters, issued writs of mandate compelling the state to reimburse the counties. Previously, the counties had filed test claims with the State Board of Control for reimbursement of similar expenses. The board determined that there was a state mandate and the counties should be reimbursed. The state did not seek judicial review of the board's decision. Thereafter, a local government claims bill, Sen. Bill No. 1261 (Stats. 1981, ch. 1090, p. 4191) was introduced to provide appropriations to pay some of the counties' claims for the state-mandated costs. After various amendments, the legislation was enacted into law without the appropriations. The counties then sought reimbursement by filing petitions for writs of mandate and complaints for declaratory relief. (Superior Court of Los Angeles County, No. C437471, Norman L. Epstein, Judge; No. C514623 and No. C515319, Jack T. Ryburn, Judge.)

In a consolidated appeal, the Court of Appeal affirmed with certain modifications. It held that, by failing to seek judicial review of the board's decision, the state had waived its right to contest the board's finding that the counties' expenditures were state mandated. Similarly, it held that the state was collaterally estopped from attacking the board's findings. It also held that the executive orders requiring the expenditures constituted the type of "program" that is subject to the constitutional imperative of subvention under Cal. Const., art. XIII B, § 6. The court also held that the trial courts had not ordered an appropriation in violation of the separation of powers doctrine, and that the trial courts correctly determined that certain legislative disclaimers, findings, and budget control language did not exonerate the state from its constitutionally and statutorily imposed obligation to reimburse the counties' state-mandated costs. Further, the court held that the trial courts properly authorized the counties to satisfy their claims by offsetting fines and forfeitures due to the state, and that the counties were entitled to interest. (Opinion by Eagleson, J., with Ashby, Acting P. J., and Hastings, J., concurring.)

HEADNOTES

CALIFORNIA OFFICIAL REPORTS HEADNOTES
Classified to California Digest of Official Reports, 3d Series

(1a) (1b) Estoppel and Waiver § 23--Waiver--Trial and Appeal--Failure to Seek Judicial Review of Administrative Decision--Waiver of Right to Contest Findings. --In a proceeding by a county for a writ of mandate to compel reimbursement by the state for funds expended in complying with a state order to provide protective clothing and equipment to county fire fighters, the state waived its right to contest findings made by the State Board of Control in a previous proceeding. The board found that the costs were state-mandated and that the county was entitled to reimbursement. The state failed to seek judicial review of the board's decision, and the statute of limitations applicable to such review had passed. Moreover, the state, through its agents, had acquiesced in the board's findings by seeking an appropriation to satisfy the validated claims, which, however, was rebuffed by the Legislature.

(2) Estoppel and Waiver § 19--Waiver--Requisites. --Waiver occurs where there is an existing right; actual or constructive knowledge of its existence; and either an actual intention to relinquish it, or conduct so inconsistent with an intent to enforce the right as to induce a reasonable belief that it has been waived. A right that is waived is lost forever. The doctrine of waiver applies to rights and privileges afforded by statute.

(3a) (3b) (3c) (3d) Judgments § 81--Res Judicata--Collateral Estoppel--County's Action for Reimbursement of State-mandated Costs--Findings of State Board of Control. --In a proceeding brought by a county for a writ of mandate to compel reimbursement by the state for funds expended in complying with a state order to provide protective clothing and equipment to county fire fighters, the state was collaterally estopped from attacking the findings made, in a previous proceeding, by the State Board of Control that the costs were

state-mandated and that the county was entitled to reimbursement. The issues were fully litigated before the board. Similarly, although the state was not a party to the board hearings, it was in privity with those state agencies which did participate. Moreover, a determination of conclusiveness would not work an injustice.

(4) Judgments § 81--Res Judicata--Collateral Estoppel--Elements. --In order for the doctrine of collateral estoppel to apply, the issues in the two proceedings must be the same, the prior proceeding must have resulted in a final judgment on the merits, and the parties or their privies must be involved.

(5) Judgments § 84--Res Judicata--Collateral Estoppel--Identity of Parties--Privity--Governmental Agents. --The agents of the same government are in privity with each other for purposes of collateral estoppel, since they represent not their own rights but the right of the government.

(6) Judgments § 96--Res Judicata--Collateral Estoppel--Matters Concluded--Questions of Law. --A prior judgment on a question of law decided by a court is conclusive in a subsequent action between the same parties where both causes involved arose out of the same subject matter or transaction, and where holding the judgment to be conclusive will not result in an injustice.

(7) State of California § 11--Fiscal Matters--Reimbursement to County for State-mandated Costs--New Programs. --A "new program," for purposes of determining whether the program is subject to the constitutional imperative of subvention under Cal. Const., art. XIII B, § 6, is one which carries out the governmental function of providing services to the public, or laws which, to implement a state policy, impose unique requirements on local governments and do not apply generally to all residents and entities in the state.

(8) State of California § 7--Actions--Reimbursement of County Funds for State-mandated Costs--New Programs. --In an action brought by a county for a writ of mandate to compel reimbursement by the state for funds expended in complying with state executive orders to provide protective clothing and equipment to county fire fighters, the trial court properly determined that the executive orders constituted the type of "new program" that was subject to the constitutional imperative of subvention under Cal. Const., art. XIII B, § 6. Fire protection is a peculiarly governmental function. Also, the executive orders manifest a state policy to provide updated equipment to all fire fighters, impose unique requirements on local governments, and do not apply generally to all residents and entities in the state, but only to those involved in fire fighting.

(9) Constitutional Law § 37--Doctrine of Separation of Powers--Violations of Doctrine--Judicial Order of Appropriation. --In a proceeding brought by a county for a writ of mandate to compel reimbursement by the state for funds expended in complying with a state order to provide protective clothing and equipment to county fire fighters, the trial court's judgment granting the writ was not in violation of the separation of powers doctrine. The court order did not directly compel the Legislature to appropriate funds or to pay funds not yet appropriated, but merely affected an existing appropriation.

(10) Constitutional Law § 40--Distribution of Governmental Powers--Between Branches of Government--Judicial Power and Its Limits--Order Directing Treasurer to Pay on Already Appropriated Funds. --Once funds have been appropriated by legislative action, a court transgresses no constitutional principle when it orders the State Controller or other similar official to make appropriate expenditures from such funds. Thus, a judgment which ordered the State Controller to draw warrants and directed the State Treasurer to pay on already-appropriated funds permissibly compelled performance of a ministerial duty.

(11) State of California § 12--Fiscal Matters--Appropriations--Reimbursement to County for State-mandated Costs. --Appropriations affected by a court order need not specifically refer to the particular expenditure in question in order to be available. Thus, in a proceeding brought by a county for a writ of mandate to compel reimbursement by the state for funds expended in complying with a state order to provide protective clothing and equipment to county fire fighters, the funds appropriated for the Department of Industrial Relations for the prevention of industrial injuries and deaths of state workers were available for reimbursement, despite the fact that the funds were not specifically appropriated for reimbursement. The funds were generally related to the nature of costs incurred by the county.

(12a) (12b) Fires and Fire Districts § 2--Statutes and Ordinances--County Compliance With State Executive Order to Provide Protective Equipment--Federal Mandate. --A county's purchase of protective clothing and equipment for its fire fighters was not the result of a federally mandated program so as to relieve the state of its obligation (Cal. Const., art. XIII B, § 6) to reimburse the county for the cost of the purchases. The county had made the purchase in compliance with a state executive order. The federal government does not have jurisdiction over local fire departments and there are no applicable

federal standards for local government structural fire fighting clothing and equipment. Hence, the county's obedience to the state executive orders was not federally mandated.

(13) Statutes § 20--Construction--Judicial Function--Legislative Declarations. --The interpretation of statutory language is purely a judicial function. Legislative declarations are not binding on the courts and are particularly suspect when they are the product of an attempt to avoid financial responsibility.

(14a) (14b) Statutes § 10--Title and Subject Matter--Single Subject Rule. --In a proceeding brought by a county for a writ of mandate to compel reimbursement by the state for funds expended in complying with a state order to provide protective clothing and equipment to county fire fighters (Cal. Admin. Code, tit. 8, §§ 3401-3409), the trial court properly invalidated, as violating the single subject rule, the budget control language of Stats. 1981, ch. 1090, § 3. The express purpose of ch. 1090 was to increase funds available for reimbursing certain claims. The budget control language, on the other hand, purported to make the reimbursement provisions of Rev. & Tax. Code, § 2207, and former Rev. & Tax. Code, § 2231, unavailable to the county. Because the budget control language did not reasonably relate to the bill's stated purpose, it was invalid.

(15) Statutes § 10--Title and Subject Matter--Single Subject Rule. --The single subject rule essentially requires that a statute have only one subject matter and that the subject be clearly expressed in a statute's title. The rule's primary purpose is to prevent "logrolling" in the enactment of laws, which occurs where a provision unrelated to a bill's main subject matter and title is included in it with the hope that the provision will remain unnoticed and unchallenged. By invalidating these unrelated clauses, the single subject rule prevents the passage of laws which might otherwise not have passed had the legislative mind been directed to them. However, in order to minimize judicial interference in the Legislature's activities, the single subject rule is to be construed liberally. A provision violates the rule only if it does not promote the main purpose of the act or does not have a necessary and natural connection with that purpose.

(16) Statutes § 5--Operation and Effect--Retroactivity--Reimbursement to County for State-mandated Costs. --The budget control language of Stats. 1981, ch. 1090, § 3, which purported to make the reimbursement provisions of Rev. & Tax. Code, § 2207 and former Rev. & Tax. Code, § 2231, unavailable to a county seeking reimbursement (Cal. Const., art. XIII B, § 6) for expenditures made in purchasing state-required protective clothing and equipment for county fire fighters (Cal. Admin. Code, tit. 8, §§ 3401-3409), was invalid as a retroactive disclaimer of the county's right to reimbursement for debts incurred in prior years.

(17) State of California § 13--Fiscal Matters--Limitations on Disposal--Reimbursement to Counties for State-mandated Costs. --The budget control language of § 28.40 of the 1981 Budget Act and § 26.00 of the 1983 and 1984 Budget Acts did not exonerate the state from its constitutional and statutory obligations to reimburse a county for the expenses incurred in complying with a state mandate to purchase protective clothing and equipment for county fire fighters. The language was invalid in that it violated the single subject rule, attempted to amend existing statutory law, and was unrelated to the Budget Acts' main purpose of appropriating funds to support the annual budget.

(18) Constitutional Law § 4--Legislative Power to Create Workers' Compensation System--Effect on County's Right to Reimbursement. --Cal. Const., art. XIV, § 4, which vests the Legislature with unlimited plenary power to create and enforce a complete workers' compensation system, does not affect a county's right to state reimbursement for costs incurred in complying with state-mandated safety orders.

(19) Constitutional Law § 7--Mandatory, Directory, and Self-executing Provisions--Subvention Provisions--County Reimbursement for Statemandated Costs. --The subvention provisions of Cal. Const., art. XIII B, § 6, operate so as to require the state to reimburse counties for state-mandated costs incurred between January 1, 1975, and June 30, 1980. The amendment, which became effective on July 1, 1980, provided that the Legislature "may, but need not," provide reimbursement for mandates enacted before January 1, 1975. Nevertheless, the Legislature must reimburse mandates passed after that date, even though the state did not have to begin reimbursement until the effective date of the amendment.

(20) Mandamus and Prohibition § 5--Mandamus--Conditions Affecting Issuance--Exhaustion of Administrative Remedies--County Reimbursement for State-mandated Costs. --A county's right of action in traditional mandamus to compel reimbursement for state-mandated costs did not accrue until the county had exhausted its administrative remedies. The exhaustion of remedies occurred when it became unmistakably clear that the legislative process was complete and that the state had breached its duty to reimburse the county.

(21) Mandamus and Prohibition § 13--Mandamus--Conditions Affecting Issuance--Existence and Adequacy of Other Remedy. --A party seeking relief by mandamus is not required to exhaust a remedy that was not in existence at the time the action was filed.

(22a) (22b) State of California § 7--Actions--Reimbursement to County for State-mandated Costs--County's Right to Offset Fines and Forfeitures Due to State. --In a proceeding by a county for a writ of mandate to compel reimbursement by the state for funds expended in complying with a state order to provide protective clothing and equipment for county fire fighters, the trial court did not err in authorizing the county to satisfy its claims by offsetting fines and forfeitures due to the state. The order did not impinge upon the Legislature's exclusive power to appropriate funds or control budget matters.

(23) Equity § 5--Scope and Types of Relief--Offset. --The right to offset is a long-established principle of equity. Either party to a transaction involving mutual debits and credits can strike or balance, holding himself owing or entitled only to the net difference. Although this doctrine exists independent of statute, its governing principle has been partially codified in Code Civ. Proc., § 431.70 (limited to cross-demands for money).

(24) State of California § 7--Actions--Reimbursement to County for State-mandated Costs--State's Use of Statutory Offset Authority. --In a proceeding brought by a county for a writ of mandate to compel reimbursement by the state for funds expended in complying with a state order to provide protective clothing and equipment to county fire fighters, the trial court did not err in enjoining the exercise of the state's statutory offset authority (Gov. Code, § 12419.5) until the county was fully reimbursed. In view of the state's manifest reluctance to reimburse, and its otherwise unencumbered statutory right of offset, the trial court was well within its authority to prevent this method of frustrating the county's collection efforts from occurring.

(25) State of California § 7--Actions--Reimbursement to County for State-mandated Costs--State's Right to Revert or Dissipate Undistributed Appropriations. --In a proceeding brought by a county for a writ of mandate to compel reimbursement by the state for funds expended in complying with a state order to provide protective clothing and equipment to county fire fighters, the trial court properly enjoined, and was not precluded by Gov. Code, § 16304.1, from enjoining, the state from directly or indirectly reverting the reimbursement award sum from the general fund line item accounts, and from otherwise dissipating that sum in a manner that would make it unavailable to satisfy the court's judgment in favor of the county.

(26) Parties § 2--Indispensable Parties--County Auditor Controller--County Action to Collect Reimbursement From State. --In an action brought by a county for a writ of mandate to compel reimbursement by the state for funds expended in complying with a state order to provide protective clothing and equipment to county fire fighters, the county auditor-controller was not an indispensable party whose absence would result in a loss of the trial court's jurisdiction. The auditor-controller was an officer of the county and was subject to the direction and control of the county board of supervisors. He was indirectly represented in the proceedings because his principal, the county, was the party litigant. Additionally, he claimed no personal interest in the action and his pro forma absence in no way impeded complete relief.

(27) Parties § 2--Indispensable Parties--Fines and Forfeitures--County Action to Collect Reimbursement From State. --In an action brought by a county for a writ of mandate to compel reimbursement by the state for costs expended in complying with a state order to provide protective clothing and equipment to county fire fighters, the funds created by the collected fines and forfeitures which the county was allowed to offset to satisfy its claims against the state were not "indispensable parties" to the litigation. The action was not an in rem proceeding, and the ownership of a particular stake was not in dispute. Complete relief could be afforded without including the specified funds as a party.

(28) Interest § 4--Interest on Judgments--County Action for Reimbursement of State-mandated Costs--State Reliance on Invalid Statute. --An invalid statute voluntarily enacted and promulgated by the state is not a defense to its obligation to pay interest on damages under Civ. Code, § 3287, subd. (a). Thus, in an action brought by a county for writ of mandate to compel reimbursement by the state for funds expended in complying with a state order to provide protective clothing and equipment to county fire fighters, the state could not avoid its obligation to pay interest on the funds by relying on invalid budget control language which purported to restrict payment on reimbursement claims.

(29) Appellate Review § 127--Review--Scope and Extent--Interpretation of Statutes. --An appellate court is not limited by the interpretation of statutes given by the trial court.

(30) Appellate Review § 162--Determination of Disposition of Cause--Modification--Action Against

State--Appropriation. --In an action against the state, an appellate court is empowered to add a directive that the trial court order be modified to include charging orders against funds appropriated by subsequent budget acts.

COUNSEL: John K. Van de Kamp, Attorney General, N. Eugene Hill, Assistant Attorney General, Marilyn K. Mayer and Carol Hunter, Deputy Attorneys General, for Defendants and Appellants.

De Witt Clinton, County Counsel, Amanda F. Susskind, Deputy County Counsel, Ross & Scott, William D. Ross and Diana P. Scott, for Plaintiffs and Respondents.

JUDGES: Opinion by Eagleson, J., with Ashby, Acting P. J., and Hastings, J., concurring.

OPINION BY: EAGLESON

OPINION

[*529] [**799] These consolidated appeals arise from three separate trial court proceedings concerning the heretofore unsuccessful efforts of various local agencies to secure reimbursement of state-mandated costs.

Case No. 2d Civ. B006078 (Carmel Valley et al. case) was the first matter decided by the trial [***2] court. The memorandum of decision in that case was judicially noticed by the trial court which heard the consolidated matters in 2d Civ. B011941 (Rincon et al. case) and 2d Civ. B011942 (County of Los Angeles case). Issues common to all three cases will be discussed together [*530] under the County of Los Angeles appeal, while issues unique to the other two appeals will be considered separately.

We identify the parties to the various proceedings in footnote 1. [1] For literary convenience, however, we will refer to all appellants as the State and all respondents as the County unless otherwise indicated.

1 *2d Civ. B006078*: The petitioners below and respondents on appeal are Carmel Valley Fire Protection District, City of Anaheim, Aptos Fire Protection District, Citrus Heights Fire Protection District, Fair Haven Fire Protection District, City of Glendale, City of San Luis Obispo, County of Santa Barbara and Ventura County Fire Protection District.

The respondents below and appellants here are State of California, Kenneth Cory and Jesse Marvin Unruh.

2d Civ. B011941: The petitioners below and respondents on appeal are Rincon Del Diablo Municipal Water District, Twenty-Nine Palms Water District, Alpine Fire Protection District, Bonita-Sunnyside Fire Protection District, Encinitas Fire Protection District, Fallbrook Fire Protection District, City of San Luis Obispo, Montgomery Fire Protection District, San Marcos Fire Protection District, Spring Valley Fire Protection District, Vista Fire Protection District and City of Coronado.

Respondents below and appellants here are State of California, State Department of Finance, State Department of Industrial Relations, State Board of Control, Kenneth Cory, State Controller, Jesse Marvin Unruh, State Treasurer, and Mark H. Bloodgood, Auditor-Controller, County of Los Angeles.

2d Civ. B011942: The County of Los Angeles is the petitioner below and respondent on appeal. Respondents below and appellants here are State of California, State Department of Finance, State Department of Industrial Relations, Kenneth Cory, and Jesse Marvin Unruh.

All respondents on appeal are conceded to be "local agencies," as defined in Revenue and Taxation Code section 2211.

[***3] Appeal In Case No. 2 Civil B011942

(County of Los Angeles Case)

Facts and Procedural History

County employs fire fighters for whom it purchased protective clothing and equipment, as required by title 8, California Administrative Code, sections 3401-3409, enacted in 1978 (executive orders). County argues that it is entitled to State reimbursement for these expenditures because they constitute a state-mandated "new program" or "higher level of service." County relies on Revenue and Taxation Code section 2207 [2] and former [*531] section 2231, [3] and California Constitution, article XIII B, section 6 [4] to support its claim.

2 [HN1]The pertinent parts of Revenue and Taxation Code section 2207 provide: "'Costs mandated by the state' means any increased costs which a local agency is required to incur as a result of the following: [para.] (a) Any law enacted after January 1, 1973, which mandates a new program or an increased level of service of an existing program; [para.] (b) Any executive order issued after January 1, 1973, which mandates a new program; [para.] (c) Any executive order issued after January 1, 1973, which (i) imple-

ments or interprets a state statute and (ii), by such implementation or interpretation, increases program levels above the levels required prior to January 1, 1973. . . ."

[***4]

3 [HN2]The pertinent parts of former Revenue and Taxation Code section 2231, subdivision (a) provide: "The state shall reimburse each local agency for all 'costs mandated by the state', as defined in Section 2207." This section was repealed (Stats. 1986, ch. 879, § 23), and replaced by Government Code section 17561. We will refer to the earlier code section.

4 [HN3]The pertinent parts of section 6, article XIII B of the California Constitution, enacted by initiative measure, provide: "Whenever the Legislature or any state agency mandates a new program or higher level of service on any local government, the state shall provide a subvention of funds to reimburse such local government for the costs of such program or increased level of service, except that the Legislature may, but need not, provide such subvention of funds for the following mandates: [para.] . . . . [para.] (c) Legislative mandates enacted prior to January 1, 1975, or executive orders or regulations initially implementing legislation enacted prior to January 1, 1975." This constitutional amendment became effective July 1, 1980.

[***5] [**800] County filed a test claim with the State Board of Control (Board) for these costs incurred during fiscal years 1978-1979 and 1979-1980. [5] After hearings were held on the matter, the Board determined on November 20, 1979, that there was a state mandate and that County should be reimbursed. State did not seek judicial review of this quasi-judicial decision of the Board.

5 County filed its test claim pursuant to former Revenue and Taxation Code section 2218, which was repealed by Statutes 1986, chapter 879, section 19.

Additionally, the Board is no longer in existence. The Commission on State Mandates has succeeded to these functions. (Gov. Code, §§ 17525, 17630.)

Thereafter, a local government claims bill, Senate Bill Number 1261 (Stats. 1981, ch. 1090, p. 4191) (S.B. 1261) was introduced to provide appropriations to pay some of County's claims for these state-mandated costs. This bill was amended by the Legislature to delete all appropriations for the payment of these claims. Other claims [***6] of County not provided for in S.B. 1261 were contained in another local government claims bill, Assembly Bill Number 171 (Stats. 1982, ch. 28, p. 51) (A.B. 171). The appropriations in this bill were deleted by the Governor. Both pieces of legislation, sans appropriations, were enacted into law. [6]

6 The final legislation did include appropriations for other local agencies on other types of approved claims.

On September 21, 1984, following these legislative rebuffs, County sought reimbursement by filing a petition for writ of mandate (Code Civ. Proc., § 1085) and complaint for declaratory relief. After appropriate responses were filed and a hearing was held, the court executed a judgment on February 6, 1985, granting a peremptory writ of mandate. A writ of mandate was issued and other findings and orders made. It is from this judgment of [*532] February 6, 1985, that State appeals. The relevant portions of the judgment are set forth verbatim below. [7]

7 "1. The Court adjudges and declares that funds appropriated by the Legislature for the State Department of Industrial Relations for the Prevention of Industrial Injuries and Deaths of California Workers within the Department's General Fund may properly be and should be spent for the reimbursement of state-mandated costs incurred by Petitioner as established in this action.

"2. A peremptory writ of mandamus shall issue under the seal of this Court, commanding Respondent State of California, through its Department of Finance, to give notification in writing as specified in Section 26.00 of the Budget Act of 1984 (Chapter 258, Statutes of 1984) of the necessity to encumber funds in conformity [with] this order and, unless the Legislature approves a bill that would enact a general law, within 30 days of said notification that would obviate the necessity of such payment, Respondent [Kenneth] Cory, the State Controller of the State of California, or his successors in office, if any, shall draw warrants on funds appropriated for the State Department of Industrial Relations for the 1984-85 Budget Year in account numbers 8350-001-001, 8350-001-452, 8350-001-453, and 8350-001-890 as implemented in Chapter 258 Statutes of 1984, sufficient to satisfy the claims of Petitioner, plus interest, as set forth in the motion and accompanying writ of mandamus. Said writ shall also issue against Jessie [*sic*] Marvin Unruh, the State Treasurer of the State of California, and his successors in office, if any, com-

manding him to make payment on the warrants drawn by Respondent Kenneth Cory.

"3. Pending the final disposition of this proceeding, or the payment of the applicable reimbursement claims and interest as set forth herein, Respondents, and each of of [*sic*] them, their successors in office, agents, servants and employees and all persons acting in concert [or] participation with them, are hereby enjoined and restrained from directly or indirectly expending from the 1984-85 General Fund Budget of the State Department of Industrial Relations as is more particularly described in paragraph number 2 hereinabove, any sums greater than that which would leave in said budget at the conclusion of the 1984-85 fiscal year an amount less than the reimbursement amounts on the aggregate amount of $ 307,685 in this case, together with interest at the legal rate through payment of said reimbursement amounts. Said amounts are hereinafter referred to collectively as the 'reimbursement award sum'.

"4. Pending the final disposition of this proceeding or the payment of the reimbursement award sum at issue herein, Respondents, and each of them, their successors in office, agents, servants and employees, and all persons acting in concert or participation with them, are hereby enjoined and restrained from directly or indirectly reverting the reimbursement award sum from the General Fund line-item accounts of the Department of Industrial Relations to the General Funds of the State of California and from otherwise dissipating the reimbursement award sum in a manner that would make it unavailable to satisfy this Court's judgment.

"5. In addition to the foregoing relief, Petitioner is entitled to offset amounts sufficient to satisfy the claims of Petitioner, plus interest, against funds held by Petitioner as fines and forfeitures which are collected by the local Courts, transferred to the Petitioner and remitted to Respondents on a monthly basis. Those fines and forfeitures are levied, and their distribution provided, as set forth in Penal Code Sections 1463.02, 1463.03, 14[6]3.5[a], and 1464; Government Code Sections 13967, 26822.3 and 72056, Fish and Game Code Section 13100; Health and Safety Code Section 11502 and Vehicle Code Sections 1660.7, 42004, and 41103.5.

"6. The Court adjudges and declares that the State has a continuing obligation to reimburse Petitioner for costs incurred in fiscal years subsequent to its claim for expenditures in the 1978-79 and 1979-80 fiscal years as set forth in the petition and the accompanying motion for the issuance of a writ of mandate.

"7. The Court adjudges and declares that deletion of funding and prohibition against accepting claims for expenditures incurred as a result of the state-mandated program of Title 8, California Administrative Code Sections 3401 through 3409 as contained in Section 3 of Chapter [1090], Statutes of 1981 were invalid and unconstitutional.

"8. The Court adjudges and declares that the expenditures incurred by Petitioner as a result of the state-mandated program of Title 8, California Administrative Code Sections 3401 through 3409 were not the result of any federally mandated program.

"9. A peremptory writ of mandamus shall issue under the seal of this Court commanding Respondent State Board of Control, or its successor-in-interest, to hear and approve the claims of Petitioner for costs incurred in complying with the state-mandated program of Title 8, California Administrative Code Sections 3401 through 3409 subsequent to fiscal year 1979-80.

". . . .

"11. The Court [adjudges] and declares that the State Respondents are prohibited from offsetting, or attempting to implement an offset against moneys due and owing Petitioner until Petitioner is completely reimbursed for all of its costs in complying with the state mandate of Title 8, California Administrative Code Sections 3401 through 3409."

[***7] [*533] [**801] Contentions

State advances two basic contentions. It first asserts that the costs incurred by County are not state mandated because they are not the result of a "new program," and do not provide a "higher level of service." Either or both of these requirements are the sine qua non of reimbursement. Second, assuming a "new program" or "higher level of service" exists, portions of the trial court order aimed at assisting the reimbursement process were made in excess of the court's jurisdiction.

These contentions are without merit. We modify and affirm all three judgments.

Discussion

I

Issue of State Mandate

The threshold question is whether County's expenditures are state mandated. [HN4]The right to reimbursement is triggered when the local agency incurs "costs mandated by the state" in either complying with a "new program" or providing "an increased level of service of an existing program." [8] State advances many theories as to why the Board erred in concluding that these expenditures are state-mandated costs. One of these arguments is whether the executive orders are a "new program" as that phrase has been recently defined by our Supreme Court in *County* [***8] *of Los Angeles* [**802] v. *State of California* (1987) 43 Cal.3d 46 [233 Cal.Rptr. 38, 729 P.2d 202].

8 This language is taken from Revenue and Taxation Code section 2207 and former section 2231. Article XIII B, section 6 refers to "higher" level of service rather than "increased" level of service. We perceive the intent of the two provisions to be identical. The parties also use these words interchangeably.

[*534] As we shall explain, State has waived its right to challenge the Board's findings and is also collaterally estopped from doing so. Additionally, although State is not similarly precluded from raising issues presented by the *State of California* case, we conclude that the executive orders are a "new program" within the meaning of article XIII B, section 6.

A. *Waiver*

(1a) We initially conclude that State has waived its right to contest the Board's findings. **(2)** [HN5]Waiver occurs where there is an existing right; actual or constructive knowledge of its existence; and either an actual [***9] intention to relinquish it, or conduct so inconsistent with an intent to enforce the right as to induce a reasonable belief that it has has been waived. (*Medico-Dental etc. Co. v. Horton & Converse* (1942) 21 Cal.2d 411, 432 [132 P.2d 457]; *Loughan v. Harger-Haldeman* (1960) 184 Cal.App.2d 495, 502-503 [7 Cal.Rptr. 581].) A right that is waived is lost forever. (*L.A. City Sch. Dist. v. Landier Inv. Co.* (1960) 177 Cal.App.2d 744, 752 [2 Cal.Rptr. 662].) The doctrine of waiver applies to rights and privileges afforded by statute. (*People v. Murphy* (1962) 207 Cal.App.2d 885, 888 [24 Cal.Rptr. 803].)

(1b) State now contends to be an aggrieved party and seeks to dispute the Board's findings. However it failed to seek judicial review of that November 20, 1979 decision (Code Civ. Proc., § 1094.5) as authorized by former Revenue and Taxation Code section 2253.5. The three-year statute of limitations applicable to such review has long since passed. (*Green v. Obledo* (1981) 29 Cal.3d 126, 141, fn. 10 [172 Cal.Rptr. 206, 624 P.2d 256]; Code Civ. Proc., § 338, subd. 1.)

In addition, State, through its agents, acquiesced in the Board's findings [***10] by seeking an appropriation to satisfy the validated claims. (Former Rev. & Tax. Code, § 2255, subd. (a).) On September 30, 1981, S.B. 1261 became law. On February 12, 1982, A.B. 171 was enacted. Appropriations had been stripped from each bill. State did not then seek review of the Board determinations even though time remained before the three-year statutory period expired. This inaction is clearly inconsistent with any intent to contest the validity of the Board's decision and results in a waiver.

B. *Administrative Collateral Estoppel*

(3a) We next conclude that State is collaterally estopped from attacking the Board's findings. **(4)** Traditionally, [HN6]collateral estoppel has been applied to bar relitigation of an issue decided in a prior court proceeding. In order for the doctrine to apply, the issues in the two proceedings must [*535] be the same, the prior proceeding must have resulted in a final judgment on the merits, and the same parties or their privies must be involved. (*People v. Sims* (1982) 32 Cal.3d 468, 484 [186 Cal.Rptr. 77, 651 P.2d 321].)

[HN7]The doctrine was extended in *Sims* to apply to a final adjudication of an administrative agency of statutory [***11] creation so as to preclude relitigation of the same issues in a subsequent criminal case. Our Supreme Court held that collateral estoppel applies to such prior adjudications where three requirements are met: (1) the administrative agency acted in a judicial capacity; (2) it resolved disputed issues properly before it; and (3) all parties were provided with the opportunity to fully and fairly litigate their claims. (*Id.* at p. 479.) All of the elements of administrative collateral estoppel are present here.

(3b) [HN8]The Board was created by the state Legislature to exercise quasi-judicial powers in adjudging the validity of claims against the State. (*County of Sacramento v. Loeb* (1984) 160 Cal.App.3d 446, 452 [206 Cal.Rptr. 626].) At the time of the hearings, the Board proceedings were the sole administrative remedy available to local agencies seeking reimbursement for state-mandated costs. (Former Rev. & [**803] Tax. Code, § 2250.) Board examiners had the power to administer oaths, examine witnesses, issue subpoenas, and receive evidence. (Gov. Code, § 13911.) The hearings were adversarial in nature and allowed for the presentation of evidence by the claimant, the Department [***12] of Finance, and any other affected agency. (Former Rev. & Tax. Code, § 2252.)

The record indicates that the state mandate issues in this case were fully litigated before the Board. A representative of the state Division of Occupational Safety and Health and the Department of Industrial Relations testified as to why County's costs were not state mandated. Representatives of the various claimant fire districts in turn offered testimony contradicting that view. The proceedings culminated in a verbatim transcript and a written statement of the basis for the Board's decision.

State complains, however, that some of the traditional elements of the collateral estoppel doctrine are missing. In particular, State argues that it was not a party to the Board hearings and was not in privity with those state agencies which did participate.

(5) [HN9]"[The] courts have held that the agents of the same government are in privity with each other, since they represent not their own rights but the right of the government. [Fn. omitted.]" (*Lerner* v. *Los Angeles City Board of Education* (1963) 59 Cal.2d 382, 398 [29 Cal.Rptr. 657, 380 P.2d 97].) **(3c)** As we stated in our introduction of the parties [***13] in this case, the party [*536] known as "State" is merely a shorthand reference to the various state agencies and officials named as defendants below. Each of these defendants is an agent of the State of California and had a mutual interest in the Board proceedings. They are thus in privity with those state agencies which did participate below (e.g., Occupational Safety and Health Division).

It is also clear that even though the question of whether a cost is state mandated is one of law (*City of Merced* v. *State of California* (1984) 153 Cal.App.3d 777, 781 [200 Cal.Rptr. 642]), subsequent litigation on that issue is foreclosed here. **(6)** [HN10]A prior judgment on a question of law decided by a court is conclusive in a subsequent action between the same parties where both causes involved arose out of the same subject matter or transaction, and where holding the judgment to be conclusive will not result in an injustice. (*City of Los Angeles* v. *City of San Fernando* (1975) 14 Cal.3d 199, 230 [123 Cal.Rptr. 1, 537 P.2d 1250]; *Beverly Hills Nat. Bank* v. *Glynn* (1971) 16 Cal.App.3d 274, 286-287 [93 Cal.Rptr. 907]; Rest.2d Judgments, § 28, p. 273.) [9]

> 9 As it happened, the entire Board determination involved a question of law since the dollar amount of the claimed reimbursement was not disputed.

[***14] **(3d)** Here, the basic issues of state mandate and the amount of reimbursement arose out of County's required compliance with the executive orders. In either forum -- Board or court -- the claims and the evidentiary and legal determination of their validity would be considered in similar fashion.

Furthermore, a determination of conclusiveness would not work an injustice. As we have noted, the Board was statutorily created to consider the validity of the various claims now being litigated. Processing of reimbursement claims in this manner was the only administrative remedy available to County. If we were to grant State's request and review the Board's determination de novo, we would, in any event, adhere to the well-settled principle of affording "great weight" to "the contemporaneous administrative construction of the enactment by those charged with its enforcement . . . ." (*Coca-Cola Co.* v. *State Bd. of Equalization* (1945) 25 Cal.2d 918, 921 [156 P.2d 1].)

[HN11]There is no policy reason to limit the application of the collateral estoppel doctrine to successive court proceedings. In *City and County of San Francisco* v. *Ang* (1979) 97 Cal.App.3d 673, 679 [159 Cal.Rptr. [***15] 56], the doctrine was applied to bar relitigation in a subsequent civil proceeding of a zoning issue previously decided by a city board of permit appeals. We similarly hold [**804] that the questions of law decided by the Board are binding in all of the subsequent civil proceedings presented here. State therefore is collaterally [*537] estopped to raise the issues of state mandate and amount of reimbursement in this appeal.

C. *Executive Orders -- A "New Program" Under Article XIII B, Section 6*

(7) The recent decision by our Supreme Court in *County of Los Angeles* v. *State of California, supra*, 43 Cal.3d at p. 49 presents a new issue not previously considered by the Board or the trial court. That question is whether the executive orders constitute the type of "program" that is subject to the constitutional imperative of subvention under article XIII B, section 6. [10] We conclude that they are.

> 10 State is not precluded from raising this new issue on appeal. [HN12]Questions of law decided by an administrative agency invoke the collateral estoppel doctrine only when a determination of conclusiveness will not work an injustice. Likewise, the doctrine of waiver is inapplicable if a litigant has no actual or constructive knowledge of his rights. Since the *State of California* rule had not been announced at the time of the Board or trial court proceedings herein, the doctrines of waiver and collateral estoppel are inapplicable to State on this particular issue. Both parties have been afforded additional time to brief the matter.

[***16] In *State of California*, the Court concluded that the term "program" has two alternative meanings: "programs that carry out the governmental

function of providing services to the public, *or* laws which, to implement a state policy, impose unique requirements on local governments and do not apply generally to all residents and entities in the state." (*Id.* at p. 56, italics added.) Although only one of these findings is necessary to trigger reimbursement, both are present here.

(8) First, [HN13]fire protection is a peculiarly governmental function. (*County of Sacramento* v. *Superior Court* (1972) 8 Cal.3d 479, 481 [105 Cal.Rptr. 374, 503 P.2d 1382].) "Police and fire protection are two of the most essential and basic functions of local government." (*Verreos* v. *City and County of San Francisco* (1976) 63 Cal.App.3d 86, 107 [133 Cal.Rptr. 649].) This classification is not weakened by State's assertion that there are private sector fire fighters who are also subject to the executive orders. Our record on this point is incomplete because the issue was not presented below. Nonetheless, we have no difficulty in concluding as a matter of judicial notice that the overwhelming [***17] number of fire fighters discharge a classical governmental function. [11]

> 11 County suggests that to the extent private fire brigades exist, they are customarily part-time individuals who perform the function on a part-time basis. As such, they are excluded by the balance of the definitional term in title 8, California Administrative Code section 3402, which provides, in pertinent part: ". . . The term [fire fighter] does not apply to emergency pick-up labor or other persons who may perform first-aid fire extinguishment as collateral to their regular duties."

[*538] The second, and alternative, prong of the *State of California* definition is also satisfied. The executive orders manifest a state policy to provide updated equipment to all fire fighters. Indeed, compliance with the executive orders is compulsory. The requirements imposed on local governments are also unique because fire fighting is overwhelmingly engaged in by local agencies. Finally, the orders do not apply generally to all residents [***18] and entities in the State but only to those involved in fire fighting.

These facts are distinguishable from those presented in *State of California.* There, the court held that a state-mandated increase in workers' compensation benefits did not require state subvention because the costs incurred by local agencies were only an incidental impact of laws that applied generally to all state residents and entities (i.e., to all workers and all governmental and nongovernmental employers). Governmental employers in that setting were indistinguishable from private employers who were obligated through insurance [**805] or direct payment to pay the statutory increases.

State of California only defined the scope of the word "program" as used in California Constitution, article XIII B, section 6. We apply the same interpretation to former Revenue and Taxation Code section 2231 even though the statute was enacted much earlier. The pertinent language in the statute is identical to that found in the constitutional provision and no reason has been advanced to suggest that it should be construed differently. In any event, [HN14]a different interpretation must fall before a constitutional [***19] provision of similar import. (*County of Los Angeles* v. *Payne* (1937) 8 Cal.2d 563, 574 [66 P.2d 658].)

II

Issue of Whether Court Orders Exceeded Its Jurisdiction

A. *The Court Has Not Ordered an Appropriation in Violation of the Separation of Powers Doctrine*

(9) State begins its general attack on the judgment by citing the longstanding principle that a court order which directly compels the Legislature to appropriate funds or to pay funds not yet appropriated violates the separation of powers doctrine. (Cal. Const., art. III, § 3; art. XVI, § 7; *Mandel* v. *Myers* (1981) 29 Cal.3d 531, 540 [174 Cal.Rptr. 841, 629 P.2d 935].) [12] State [*539] observes (and correctly so) that the relevant constitutional [HN15](art. XIII B, § 6) and statutory (Rev. & Tax. Code, § 2207 & former § 2231) provisions are not appropriations measures. (See *City of Sacramento* v. *California State Legislature* (1986) 187 Cal.App.3d 393, 398 [231 Cal.Rptr. 686].) Since State otherwise discerns no manifest legislative intent to appropriate funds to pay County's claims (*City & County of S. F.* v. *Kuchel* (1948) 32 Cal.2d 364, 366 [196 P.2d 545]), it concludes that the [***20] judgment unconstitutionally compels performance of a legislative act.

> 12 [HN16]Article III, section 3 of the California Constitution provides: "The powers of state government are legislative, executive, and judicial. Persons charged with the exercise of one power may not exercise either of the others except as permitted by this Constitution."
>
> [HN17]Article XVI, section 7 of the California Constitution provides: "Money may be drawn from the Treasury only through an appropriation made by law and upon a Controller's duly drawn warrant."

State further argues that the judiciary's ability to reach an existing agency-support appropriation (State Department of Industrial Relations) (fn. 7, [para.] 1,

ante) has been approved in only two contexts. First, the court can order payment from an existing appropriation, the expenditure of which has been legislatively prohibited by an unconstitutional or unlawful restriction. (*Committee to Defend Reproductive Rights* v. *Cory* (1982) 132 Cal.App.3d 852, 856 [183 Cal.Rptr. [***21] 475].) Second, once an adjudication has finally determined the rights of the parties, the court may compel satisfaction of the judgment from a current unexpended, unencumbered appropriation which administrative agencies routinely have used for the purpose in question. (*Mandel* v. *Myers, supra*, 29 Cal.3d at p. 544.) State insists that these facts are not present here.

County rejoins that a writ of traditional mandate (Code Civ. Proc., § 1085) is the correct method of compelling State to perform a clear and present ministerial legal obligation. (*County of Sacramento* v. *Loeb, supra*, 160 Cal.App.3d at pp. 451-452.) The ministerial obligation here is contained in California Constitution, article XIII B, section 6 and in Revenue and Taxation Code section 2207 and former section 2231. These provisions require State to reimburse local agencies for state-mandated costs.

We reject State's general characterization of the judgment by noting that it only affects an existing appropriation. It declares (fn. 7, para. 1, *ante*) that only funds already "*appropriated* by the Legislature for the State Department of Industrial Relations for the Prevention of Industrial Injuries [***22] and Deaths of California Workers within the Department's General Fund" [**806] shall be spent for reimbursement of County's state-mandated costs. (Italics added.) There is absolutely no language purporting to require the Legislature to enact appropriations or perform any other act that might violate separation of powers principles. **(10)** By simply ordering the State Controller to draw warrants and directing the State Treasurer to pay on already appropriated funds (fn. 7, para. 2, *ante*), the judgment permissibly compels performance of a ministerial duty: [HN18]"[Once] funds have already been appropriated by legislative action, a court transgresses no constitutional principle when it orders the State Controller or other similar official to make appropriate expenditures [*540] from such funds. [Citations.]" (*Mandel* v. *Myers, supra*, 29 Cal.3d at p. 540.)

As we will discuss in further detail below, the subject funds (fn. 7, para. 1, *ante*) were saddled with an unconstitutional restriction (fn. 7, para. 7, *ante*). However, *Mandel* establishes that such a restriction does not necessarily infect the entire appropriation. There, the Legislature had improperly prohibited [***23] the use of budget funds to pay a court-ordered and administratively approved attorney's fees award. The court reasoned that [HN19]as long as appropriated funds were "reasonably available for the expenditures in question, the separation of powers doctrine poses no barrier to a judicial order directing the payment of such funds." (*Id.* at p. 542.) The court went on to find that money in a general "operating expenses and equipment" fund was, by both the Budget Act's terms and prior administrative practice, reasonably available to pay the attorney's fees award.

Contrary to State's argument, *Mandel* does not require that past administrative practice support a judgment for reimbursement from an otherwise available appropriation. Although there was evidence of a prior administrative practice of paying counsel fees from funds in the "operating expenses and equipment" budget, this fact was not the main predicate of the court's holding. Rather, the decisive factor was that the budget item in question functioned as a "catchall" appropriation in which funds were still reasonably available to satisfy the State's adjudicated debt. (*Id.* at pp. 543-544.)

Another illustration of this principle [***24] is found in *Serrano* v. *Priest* (1982) 131 Cal.App.3d 188 [182 Cal.Rptr. 387]. Plaintiffs in that case secured a judgment against the State of California for $ 800,000 in attorney's fees. The judgment was not paid, and subsequent proceedings were brought against State to satisfy the judgment. The trial court directed the State Controller to pay the $ 800,000 award, plus interest, from funds appropriated by the Legislature for "operating expenses and equipment" of the Department of Education, Superintendent of Public Instruction and State Board of Education. (*Id.* at p. 192.) This court affirmed that order even though there was no evidence that the agencies involved had ever paid court-ordered attorney's fees from that portion of the budget. Relying on *Mandel*, we concluded that funds were reasonably available from appropriations enacted in the Budget Act in effect at the time of the court's order, as well as from similar appropriations in subsequent budget acts.

(11) State also incorrectly asserts that the appropriations affected by the court's order must specifically refer to the particular expenditure in question in order to be available. This notion was summarily [***25] dismissed in *Mandel* v. *Myers, supra*, 29 Cal.3d at pp. 543-544. Likewise, in *Committee to Defend* [*541] *Reproductive Rights* v. *Cory, supra*, 132 Cal.App.3d at pp. 857-858, the court decreed that payments for Medi-Cal abortions could properly be ordered from monies appropriated for other Medi-Cal services, even though this use had been specifically prohibited by the Legislature.

Applying these various principles here, we note that the judgment (fn. 7, para. 2, *ante*) identified funds in account numbers 8350-001-001, 8350-001-452, 8350-001-453 and [**807] 8350-001-890 as being

available for reimbursement. Within these 1984-1985 account appropriations for the Department of Industrial Relations were monies for Program 40, the Prevention of Industrial Injuries and Deaths of California Workers. The evidence clearly showed that the remaining balances on hand would cover the cost of reimbursement. Since it is conceded that the fire fighting protective clothing and equipment in this case was purchased to prevent deaths and injuries to fire fighters, these funds, although not specifically appropriated for the reimbursement in question, were generally related to [***26] the nature of costs incurred by County and are therefore reasonably available for reimbursement.

B. *Legislative Disclaimers, Findings and Budget Control Language Are No Defense to Reimbursement*

As a general defense against the order to reimburse, State insists that the Legislature has itself concluded that the claimed costs are not reimbursable. This determination took the combined form of disclaimers, findings and budget control language. State interprets this self-serving legislation, as well as the legislative and gubernatorial deletions, as forever sweeping away State's obligation to reimburse the state-mandated costs at issue. Consequently, any order that ignores these restrictions on payment would amount to a court-ordered appropriation. As we shall conclude, these efforts are merely transparent attempts to do indirectly that which cannot lawfully be done directly.

The seminal legislation that gave rise to the 1978 executive orders was enacted by [HN20]Statutes 1973, chapter 993, and is labeled the California Occupational Safety and Health Act (Cal/OSHA). It is modeled after federal law and is designed to assure safe working conditions for all California workers. A [***27] legislative disclaimer appearing in [HN21]section 106 of that bill reads: "No appropriation is made by this act . . . for the reimbursement of any local agency for any costs that may be incurred by it in carrying on any program or performing any service required to be carried on . . . ." The stated reason for this decision not to appropriate was that the cost of implementing the act was "minimal on a statewide basis in relation to the effect on local tax rates." (Stats. 1973, ch. 993, § 106, p. 1954.)

[*542] Again, in 1974, [HN22]the Legislature stated: "Notwithstanding Section 2231 of the Revenue and Taxation Code, there shall be no reimbursement pursuant to this section, nor shall there be an appropriation made by this act, because the Legislature finds that this act and any executive regulations or safety orders issued pursuant thereto merely implement federal law and regulations." (Stats. 1974, ch. 1284, § 106, p. 2787.) This statute amended section 106 of Statutes 1973, chapter 993, and was a post facto change in the stated legislative rationale for not providing reimbursement.

Presumably because of the large number of reimbursement claims being filed, the Legislature subsequently [***28] used budget control language to confirm that compliance with the executive orders should not trigger reimbursement. Some of this legislation was effective September 30, 1981, as part of a local agency and school district reimbursement bill. The control language provided that [HN23]"[the] Board of Control shall not accept, or submit to the Legislature, any more claims pursuant to . . . Sections 3401 to 3409, inclusive, of Title 8 of the California Administrative Code." (Stats. 1981, ch. 1090, § 3, p. 4193.) [13]

13 When Governor Brown deleted the appropriations from A.B. 171, he stated that he was relying on the pronouncements in Statutes 1974, chapter 1284 and Statutes 1981, chapter 1090.

Further control language was inserted in the 1981, 1983 and 1984 Budget Acts. [HN24](Stats. 1981, ch. 99, § 28.40, p. 606; Stats. 1983, ch. 324, § 26.00, p. 1504; Stats. 1984, ch. 258, § 26.00.) This language prohibits encumbering appropriations to reimburse costs incurred under the executive orders, except under certain limited [***29] circumstances.

(12a) State first challenges the trial court's finding that expenditures mandated by the [**808] executive orders were not the result of a federally mandated program (fn. 7, para. 8, *ante*), despite the legislative finding in Statutes 1974, chapter 1284, section 106. We agree with the court's decision that there was no federal mandate.

The significance of this no-federal-mandate finding is revealed by examining past changes in the statutory definition of state-mandated costs. As thoroughly discussed in *City of Sacramento v. State of California* (1984) 156 Cal.App.3d 182, 196-197 [203 Cal.Rptr. 258] disapproved on other grounds in *County of Los Angeles v. State of California, supra*, 43 Cal.3d at p. 58, fn. 10, [HN25]the concept of federally mandated costs has provided local agencies with a financial escape valve ever since passage of the "Property Tax Relief Act of 1972." (Stats. 1972, ch. 1406, § 1, p. 2931.) That act limited local governments' power to levy property taxes, while requiring that they be reimbursed by the State for providing compulsory increased levels of service or [*543] new programs. However, under Revenue and Taxation Code section [***30] 2271, "costs mandated by the federal government" were not subject to reimbursement and local governments were permitted to levy taxes in addition to the maximum property tax rate to pay such costs.

On November 6, 1979, [HN26]the limitation on local government's ability to raise property taxes, and the duty of the State to reimburse for state-mandated costs, became a part of the California Constitution through the initiative process. Article XIII B, section 6, enacted at that time, directs state subvention similar in nature to that required by the preexisting provisions of Revenue and Taxation Code section 2207 and former section 2231. As a defense against this duty to reimburse local agencies, the Legislature began to insert disclaimers in bills which mandated costs on local agencies. It also amended [HN27]Revenue and Taxation Code section 2206 to expand the definition of nonreimbursable "costs mandated by the federal government" to include the following: "costs resulting from enactment of a state law or regulation where failure to enact such law or regulation to meet specific federal program or service requirements would result in substantial monetary penalties or loss of funds to public [***31] or private persons in the state."

In applying this definition here, State offers nothing more than the bare legislative finding contained in Statutes 1974, chapter 1284, section 106. State contends that a federally mandated cost cannot, by definition, be a state-mandated cost. Therefore, if the cost is federally mandated, local agency reimbursement is not required. **(13)** (See fn. 14.) Although State's argument is correct in the abstract, neither the facts nor federal law supports the underlying assumption that there is a federal mandate. [14]

> 14 We address this subject only because the trial court found that the costs were not federally mandated. Actually, State cannot raise this issue on appeal because of the waiver and administrative collateral estoppel doctrines. We note, however, where there is a quasi-judicial finding that a cost is state mandated, there is an implied finding that the cost is not federally mandated; the two concepts are mutually exclusive.
>
> Moreover, our task is aided by the fact that [HN28]interpretation of statutory language is purely a judicial function. Legislative declarations are not binding on the courts and are particularly suspect when they are the product of an attempt to avoid financial responsibility. (*City of Sacramento v. State of California, supra*, 156 Cal.App.3d at pp. 196-197.)

[***32] **(12b)** Both the Board and the court had in evidence a letter from a responsible official of the federal Occupational Safety and Health Administration (OSHA). The letter emphasizes the independence of state and federal OSHA standards: "OSHA does not have jurisdiction over the fire departments of any political subdivision of a state whether the state has elected to have its own state plan under the OSHA act or not. . . . [para.] More specifically, in 1978, the State of California promulgated standards applicable to fire departments in California. Therefore, California standards, rather than [*544] federal OSHA standards, are applicable to fire departments in that state. . . ." This theme is also reflected in a section of [**809] OSHA which expressly disclaims jurisdiction over local agencies such as County. (29 U.S.C. § 652(5).) Accordingly, as a matter of law, there are no federal standards for local government structural fire fighting clothing and equipment.

In short, while the Legislature's enactment of Cal/OSHA to comply with federal OSHA standards is commendable, it certainly was not compelled. Consequently, County's obedience to the 1978 executive orders is not [***33] federally mandated.

(14a) The trial court also properly invalidated the budget control language in Statutes 1981, chapter 1090, section 3 (fn. 7, [para.] 7, *ante*) because it violated the single subject rule. [15] This legislative restriction purported to make the reimbursement provisions of Revenue and Taxation Code section 2207 and former section 2231 unavailable to County.

> 15 [HN29]Article IV, section 9 of the California Constitution reads: "A statute shall embrace but one subject, which shall be expressed in its title. If a statute embraces a subject not expressed in its title, only the part not expressed is void. A statute may not be amended by reference to its title. A section of a statute may not be amended unless the section is re-enacted as amended."

(15) [HN30]The single subject rule essentially requires that a statute have only one subject matter and that the subject be clearly expressed in the statute's title. The rule's primary purpose is to prevent "log-rolling" in the enactment of laws. This disfavored practice [***34] occurs where a provision unrelated to a bill's main subject matter and title is included in it with the hope that the provision will remain unnoticed and unchallenged. By invalidating these unrelated clauses, the single subject rule prevents the passage of laws which otherwise might not have passed had the legislative mind been directed to them. (*Planned Parenthood Affiliates v. Swoap* (1985) 173 Cal.App.3d 1187, 1196 [219 Cal.Rptr. 664].) However, in order to minimize judicial interference in the Legislature's activities, the single subject rule is to be construed liberally. A provision violates the rule only if it does not promote the main purpose of the act or does not have a necessary and natural connection with that purpose. (*Metropolitan Water Dist. v. Marquardt* (1963) 59 Cal.2d 159, 172-173 [28 Cal.Rptr. 724, 379 P.2d 28].)

(14b) The stated purpose of chapter 1090 is to increase funds available for reimbursing certain claims. It describes itself as an "act making an appropriation to pay claims of local agencies and school districts for additional reimbursement for specified state-mandated local costs, awarded by the State Board of Control, and declaring the [***35] urgency thereof, to take effect immediately." (Stats. 1981, ch. 1090, p. 4191.) There is nothing in this introduction [*545] alerting the reader to the fact that the bill prohibits the Board from entertaining claims pursuant to the Cal/OSHA executive orders. The control language does not modify or repeal these orders, nor does it abrogate the necessity for County's continuing compliance therewith. It simply places County's claims reimbursement process in limbo.

This special appropriations bill is similar in kind to appropriations in an annual budget act. Observations that have been made in connection with the enactment of a budget bill are appropriate here. "[The] annual budget bill is particularly susceptible to abuse of [the single subject] rule. 'History tells us that the general appropriation bill presents a special temptation for the attachment of riders. It is a necessary and often popular bill which is certain of passage. If a rider can be attached to it, the rider can be adopted on the merits of the general appropriation bill without having to depend on its own merits for adoption.' [Citation.]" (*Planned Parenthood Affiliates v. Swoap, supra*, 173 [***36] Cal.App.3d at p. 1198.) Therefore, the annual budget bill must only concern the subject of appropriations to support the annual budget and may not constitutionally be used to substantively amend or change existing statutory law. (*Association for Retarded Citizens v. Department of Developmental Services* (1985) 38 Cal.3d 384, 394 [211 Cal.Rptr. 758, 696 P.2d 150].) We see no reason to apply a [**810] less stringent standard to a special appropriations bill. Because the language in chapter 1090 prohibiting the Board from processing claims does not reasonably relate to the bill's stated purpose, it is invalid.

(16) The budget control language in chapter 1090 is also invalid as a retroactive disclaimer of County's right to reimbursement for debts incurred in prior years. This legislative technique was condemned in *County of Sacramento v. Loeb, supra*, 160 Cal.App.3d at p. 446. There, the Legislature had enacted a Government Code section which prohibited using appropriations for any purpose which had been denied by any formal action of the Legislature. The State attempted to use this code section to uphold a special appropriations bill which had deleted County's Board-approved [***37] claims for costs which were incurred prior to the enactment of the code section. The court held that the code section did not apply retroactively to defeat County's claims: [HN31]"A retroactive statute is one which relates back to a previous transaction and gives that transaction a legal effect different from that which it had under the law when it occurred. . . . 'Absent some clear policy requiring the contrary, statutes modifying liability in civil cases are not to be construed retroactively.'" (*Id.* at p. 459, quoting *Robinson v. Pediatric Affiliates Medical Group, Inc.* (1979) 98 Cal.App.3d 907, 912 [159 Cal.Rptr. 791].) Similarly, the control language in chapter 1090 does not apply retroactively to County's prior, Board-approved claims.

[*546] **(17)** Finally, the control language in section 28.40 of the 1981 Budget Act and section 26.00 [16] of the 1983 and 1984 Budget Acts does not work to defeat County's claims. (Stats. 1981, ch. 99, § 28.40, p. 606; Stats. 1983, ch. 324, § 26.00, p. 1504; Stats. 1984, ch. 258, § 26.00.) This section is comprised of both substantive and procedural provisions. We are concerned primarily with those portions that purport to exonerate [***38] State from its constitutionally and statutorily imposed obligation to reimburse County's state-mandated costs.

> 16 [HN32]Each of these sections contains the following language: "No funds appropriated by this act shall be encumbered for the purpose of funding any increased state costs or local governmental costs, or both such costs, arising from the issuance of an executive order as defined in section 2209 of the Revenue and Taxation Code or subject to the provisions of section 2231 of the Revenue and Taxation Code, unless (a) such funds to be encumbered are appropriated for such purpose, or (b) notification in writing of the necessity of the encumbrance of funds available to the state agency, department, board, bureau, office, or commission is given by the Department of Finance, at least 30 days before such encumbrance is made, to the chairperson of the committee in each house which considers appropriations and the Chairperson of the Joint Legislative Budget Committee, or such lesser time as the chairperson of the committee, or his or her designee, determines."

[***39] The writ of mandate directed compliance with the procedural provisions of these sections and is not a point of dispute on appeal. Subsection (a) affords the Legislature one last opportunity to appropriate funds which are to be encumbered for the purpose of paying state-mandated costs, an invitation repeatedly rejected. Subsection (b) directs that the Department of Finance notify the chairpersons of the appropriate committees in each house and chairperson of the Joint Legislative Budget Committee of the need to encumber funds. Presumably, the objective of this procedure is to give the

Legislature another opportunity to amend or repeal substantive legislation requiring local agencies to incur state-mandated costs. Again, the Legislature declined to act. Legislative action pursuant to subsection (b) could arguably ameliorate the plight of local agencies prospectively, but would be of no practical assistance to a local agency creditor seeking reimbursement for costs already incurred.

The first portion of each section, however, imposes a budgetary restriction on encumbering appropriated funds to reimburse for state-mandated costs arising out of compliance with the executive orders, [***40] absent a specific appropriation pursuant to subparagraph (b). For the reasons stated above, this substantive language is invalid under the single subject rule. It attempts [**811] to amend existing statutory law and is unrelated to the Budget Acts' main purpose of appropriating funds to support the annual budget. (*Association for Retarded Citizens v. Department of Developmental Services, supra*, 38 Cal.3d at p. 394.) Now unfettered by invalid restrictions, the appropriations involved in this case are reasonably available for reimbursement.

[*547] C. *The Legislature's Plenary Power to Regulate Worker Safety Does Not Affect the Right to Reimbursement*

(18) State contends that article XIV, section 4 of the California Constitution vests the Legislature with unlimited plenary power to create and enforce a complete workers' compensation system. It postulates that the Legislature may determine that the interest in worker safety and health is furthered by requiring local agencies to bear the costs of safety devices. This non sequitur is advanced without citation of authority.

[HN33]Article XIV, section 4 concerns the power to enact workers' compensation statutes and regulations. [***41] It does not focus on the issue of reimbursement for state-mandated costs, which is covered by Revenue and Taxation Code section 2207 and former section 2231, and article XIII B, section 6. Since these latter provisions do not effect a pro tanto repeal of the Legislature's plenary power over workers' compensation law (see *County of Los Angeles v. State of California, supra*, 43 Cal.3d 46), they do not conflict with article XIV, section 4.

Moreover, even though the reimbursement issue has come before the Legislature repeatedly since 1972, no law has been enacted to exempt compliance with workers' compensation executive orders from the mandatory reimbursement provisions of Revenue and Taxation Code section 2207 and former section 2231. Likewise, article XIII B, section 6 does not provide an exception to the obligation to reimburse local agencies for compliance with these safety orders.

D. *Pre-1980 Claims Are Reimbursable Under Article XIII B, Section 6, Effective July 1, 1980*

(19) State further argues that to the extent County's claims for fiscal years 1978-1979 and 1979-1980 are predicated on the subvention provisions of article XIII B, section 6, they fall within a [***42] "window period" of nonreimbursement. This assertion emanates from section 6, subdivision (c), which states that the Legislature "[may], but need not," provide reimbursement for mandates enacted before January 1, 1975. State reasons that because the constitutional amendment did not become effective until July 1, 1980, claims for costs incurred between January 1, 1975 and June 30, 1980, need not be reimbursed.

This notion was rejected in *City of Sacramento v. State of California, supra*, 156 Cal.App.3d at p. 182 on behalf of local agencies seeking reimbursement of unemployment insurance costs mandated by a 1978 statute. Basing its decision on well-settled principles of constitutional interpretation [*548] and upon a prior published opinion of the Attorney General, the court interpreted [HN34]section 6, subdivision (c) as follows: "[The] Legislature *may* reimburse mandates enacted prior to January 1, 1975, and *must* reimburse mandates passed after that date, but does not have to begin such reimbursement until the effective date of article XIII B (July 1, 1980)." (*Id.* at p. 191, italics in original.) In other words, the amendment operates on "window period" mandates [***43] even though the reimbursement process may not actually commence until later.

We agree with this reasoning and find costs incurred by County under the 1978 executive orders subject to reimbursement under the Constitution.

E. *Claims Under Revenue and Taxation Code Section 2207 and Former Section 2231 Are Not Time-barred*

(20) State collaterally asserts that to the extent County bases its claims on Revenue and Taxation Code section 2207 and former [**812] section 2231, they are barred by Code of Civil Procedure sections 335 and 338, subdivision 1. This omnibus challenge to the order directing payment has no merit.

[HN35]Code of Civil Procedure section 335 is a general introductory section to the statute of limitations for all matters except recovery of real property. Code of Civil Procedure section 338, subdivision 1 requires "[an] action upon a liability created by statute" to be commenced within three years.

[HN36]A claimant does not exhaust its administrative remedies and cannot come under the court's jurisdic-

tion until the legislative process is complete. (*County of Contra Costa* v. *State of California* (1986) 177 Cal.App.3d 62, 77 [222 Cal.Rptr. 750].) Here, County pursued [***44] its remedy before the Board and prevailed. Thereafter, as required by law, appropriate legislation was introduced. Both the Board hearings and the subsequent efforts to secure legislative appropriations were part of the legislative process. (Former Rev. & Tax. Code, § 2255, subd. (a).) It was not until the legislation was enacted sans appropriations on September 30, 1981 (S.B. 1261) and February 12, 1982 (A.B. 171) that it became unmistakably clear that this process had ended and State had breached its duty to reimburse. At these respective moments of breach, County's right of action in traditional mandamus accrued. County's petition was filed on September 21, 1984, within the three-year statutory period. [17] (*Lerner* v. *Los Angeles City Board of Education, supra*, 59 Cal.2d at p. 398.)

17 Technically, Statute has waived the statute of limitations defense because it was not raised in its answer. (*Ventura County Employees' Retirement Association* v. *Pope* (1978) 87 Cal.App.3d 938, 956 [151 Cal.Rptr. 695].)

[***45] [*549] F. *Government Code Section 17612's Remedy for Unfunded Mandates Does Not Supplant the Court's Order*

State continues its general attack on the order directing payment by arguing that the Legislature has "defined" the remedy available to a local agency if a mandate is unfunded. That remedy is found in [HN37]Government Code section 17612, subdivision (b) and reads: "If the Legislature deletes from a local government claims bill funding for a mandate, the local agency . . . *may* file in the Superior Court of the County of Sacramento an action in declaratory relief to declare the mandate unenforceable and enjoin its enforcement." (Italics added.) (See also former Rev. & Tax. Code, § 2255, subd. (c), eff. Oct. 1, 1982.)

State hints that this procedure is the only remedy available to a local agency if funding is not provided. At oral argument, State admitted that this declaration of enforceability and injunction against enforcement would be prospective only. This remedy would provide no relief to local agencies which have complied with the executive orders.

We conclude that Government Code section 17612, subdivision (b) is inapplicable here because it did not become [***46] operative until January 1, 1985. It was not in place when the Board rendered its decision on November 20, 1979; when funding was deleted from S.B. 1261 (Sept. 30, 1981) and A.B. 171 (Feb. 12, 1982); or when this litigation commenced on September 21, 1984. **(21)** A party is not required to exhaust a remedy that was not in existence at the time the action was filed. (*Ross* v. *Superior Court* (1977) 19 Cal.3d 899, 912, fn. 9 [141 Cal.Rptr. 133, 569 P.2d 727].) To abide by this post facto legislation now would condone legislative interference in a specific controversy already assigned to the judicial branch for resolution. (*Serrano* v. *Priest, supra*, 131 Cal.App.3d at p. 201.)

Also, [HN38]this remedy is purely a discretionary course of action. By using the permissive word "may," the Legislature did not intend to override article XIII B, section 6 and Revenue and Taxation Code section 2207 and former section 2231. These constitutional and statutory imprimaturs each impose upon the State an obligation to reimburse for state-mandated [**813] costs. Once that determination is finally made, the State is under a clear and present ministerial duty to reimburse. In the absence of [***47] compliance, traditional mandamus lies. (Code Civ. Proc., § 1085.) [18]

18 We leave undecided the question of whether this type of legislation could ever be held to override California Constitution, article XIII B, section 6. [HN39]The Constitution of the State is supreme. Any statute in conflict therewith is invalid. (*County of Los Angeles* v. *Payne, supra*, 8 Cal.2d at p. 574.)

Similarly, [HN40]former Revenue and Taxation Code section 2255, subdivision (c) cannot abrogate the constitutional directive to reimburse.

[*550] G. *The Court's Order Properly Allows County the Right of Offset*

(22a) As the first in a series of objections to portions of the judgment which assist in the reimbursement process, State argues that the court has improperly authorized County to satisfy its claims by offsetting fines and forfeitures due to State. (Fn. 7, para. 5, *ante*.) The fines and forfeitures are those found in Penal Code sections 1463.02, 1463.03, 1463.5a and 1464; Government Code sections 13967, 26822.3 and [***48] 72056; Fish and Game Code section 13100; Health and Safety Code section 11502; and Vehicle Code sections 1660.7, 42004 and 41103.5. [19]

19 At oral argument, County conceded that the order authorizing offset of Fish and Game Code section 13100 fines and forfeitures is inappropriate. These collected funds must be spent exclusively for protection, conservation, propagation or preservation of fish, game, mollusks, or crustaceans, and for administration and enforcement of laws relating thereto, or for any such

purpose. (Cal. Const., art. XVI, § 9; 20 Ops. Cal. Atty. Gen. 110 (1952).)

Broadly speaking, these statutes require County to periodically transfer all or part of the fines and forfeitures collected by it for specified law violations to the State Treasury. They are to be held there "to the credit" of various state agencies, or for payment into specific funds. State contends that since these statutes require mandatory, regular transfers and do not expressly permit diversion for other purposes, the court [***49] had no power to allow County to offset. State cites no authority for this contention.

(23) [HN41]The right to offset is a long-established principle of equity. Either party to a transaction involving mutual debits and credits can strike a balance, holding himself owing or entitled only to the net difference. (*Kruger* v. *Wells Fargo Bank* (1974) 11 Cal.3d 352, 362 [113 Cal.Rptr. 449, 521 P.2d 441, 65 A.L.R.3d 1266].) Although this doctrine exists independent of statute, its governing principle has been partially codified (Code Civ. Proc., § 431.70) (limited to cross-demands for money).

The doctrine has been applied in favor of a local agency against the State. In *County of Sacramento* v. *Lackner* (1979) 97 Cal.App.3d 576 [159 Cal.Rptr.1], for example, the court of appeal upheld a trial court's decision to grant a writ of mandate that ordered funds awarded the County under a favorable judgment to be offset against its current liabilities to the State under the Medi-Cal program. The court stated that such an order does not interfere with the "Legislature's control over the 'submission, approval and enforcement of budgets . . . '" (*Id.* at p. 592, quoting Cal. Const., art. [***50] IV, § 12, subd. (e).)

(22b) The order herein likewise does not impinge upon the Legislature's exclusive power to appropriate funds or control budget matters. The identified [*551] fines and forfeitures are collected by the County for statutory law violations. Some of these funds remain with the County, while others are transferred to the State. State's portions are uncertain as to amount and date of transfer. State does not come into actual possession of these funds until they are transferred. State's holding of these funds "to the credit" of a particular agency, or for payment to a specific fund, does not commence until their receipt. Until that time, they are unencumbered, unrestricted and subject to offset.

H. *State's Use of its Statutory Offset Authority Was Properly Enjoined*

(24) State further contends that the trial court exceeded its jurisdiction by enjoining [**814] the exercise of State's statutory offset authority until County is fully reimbursed. (Fn. 7, para. 11, *ante*.) [20] This order complemented that portion of the order discussed, *infra*, which allowed County to temporarily offset fines and forfeitures as an aid in the reimbursement process. [***51]

20 [HN42]Government Code section 12419.5 provides: "The Controller may, in his discretion, offset any amount due a state agency from a person or entity, against any amount owing such person or entity by any state agency. The Controller may deduct from the claim, and draw his warrants for the amounts offset in favor of the respective state agencies to which due, and, for any balance, in favor of the claimant. . . . The amount due any person or entity from the state or any agency thereof is the net amount otherwise owing such person or entity after any offset as in this section provided." (See also *Tyler* v. *State of California* (1982) 134 Cal.App.3d 973, 975-976 [185 Cal.Rptr. 49].)

State correctly observes that it has not unlawfully used its offset authority during the course of this dispute. However, State has not needed to do so because it has adopted other means of avoiding payment on County's claims. In view of State's manifest reluctance to reimburse, and its otherwise unencumbered statutory right [***52] of offset, the trial court was well within its authority to prevent this method of frustrating County's collection efforts from occurring. (See *County of Los Angeles* v. *State of California* (1984) 153 Cal.App.3d 568 [200 Cal.Rptr. 394].)

I. *The Injunction Against Reversion or Dissipation of Undisbursed Appropriations Is Proper*

(25) State continues that the order (fn. 7, para. 4, *ante*) enjoining it from directly or indirectly reverting the reimbursement award sum from the general fund line item accounts, and from otherwise dissipating that sum in a manner that would make it unavailable to satisfy this court's judgment, violates Government Code section 16304.1. [21] This section reverts undisbursed [*552] balances in any appropriation to the fund from which the appropriation was made. No authority is cited for State's proposition. To the contrary, *County of Sacramento* v. *Loeb*, *supra*, 160 Cal.App.3d at pp. 456-457 expressly confirms this type of ancillary remedy as a legitimate exercise of the court's authority to assist in collecting on an adjudicated debt, the payment of which has been delayed all too long.

21 [HN43]Government Code section 16304.1 provides: "Disbursements in liquidation of encumbrances may be made before or during the

two years following the last day an appropriation is available for encumbrance . . . . Whenever, during [such two-year period], the Director of Finance determines that the project for which the appropriation was made is completed and that a portion of the appropriation is not necessary for disbursements, such portion shall, upon order of the Director of Finance, revert to and become a part of the fund from which the appropriation was made. Upon the expiration of two years . . . following the last day of the period of its availability, the undisbursed balance in any appropriation shall revert to and become a part of the fund from which the appropriation was made. . . ."

[***53] That portion of the order restraining reversion is particularly innocuous because it only affects undisbursed balances in an appropriation. At the time of reversion, it is crystal clear that these remaining funds are unneeded for the primary purpose for which appropriated; otherwise, they would not exist. Moreover, that portion of the order restraining dissipation of the reimbursement award sum in a manner that would make it unavailable to satisfy a court's judgment is similarly a proper exercise of the court's authority. By not reimbursing County for the state-mandated costs, State would be contravening its constitutional and statutory obligations to subvent. To the extent it is not reimbursed, County would be compelled, contrary to law, to bear the cost of complying with a state-imposed obligation.

J. *The Auditor Controller and the Specified Funds Are Not Indispensable Parties*

(26) (27) State next contends that the Auditor Controller of Los Angeles County and the "specified" fines and forfeitures County was allowed to offset are indispensable [**815] parties. Failure to join them in the action or to serve them with process purportedly renders the trial court's order void [***54] as in excess of its jurisdiction. [22] State cites only the general statutory definition of an indispensable party (Code Civ. Proc., § 389) to support this assertion.

22 [HN44]Code of Civil Procedure section 389, subdivision (a) provides: "A person who is subject to service of process and whose joinder will not deprive the court of jurisdiction over the subject matter of the action shall be joined as a party in the action if (1) in his absence complete relief cannot be accorded among those already parties or (2) he claims an interest relating to the subject of the action and is so situated that the disposition of the action in his absence may (i) as a practical matter impair or impede his ability to protect that interest or (ii) leave any of the persons already parties subject to a substantial risk of incurring double, multiple, or otherwise inconsistent obligations by reason of his claimed interest. If he has not been so joined, the court shall order that he be made a party."

[HN45]The Auditor Controller is an officer [***55] of the County and is subject to the [*553] direction and control of the County board of supervisors. (Gov. Code, §§ 24000, subds. (d), (e), 26880; L.A. County Code, § 2.10.010.) He is indirectly represented in these proceedings because his principal, the County, is the party litigant. Additionally, he claims no personal interest in the fines and forfeitures and his pro forma absence in no way impedes complete relief.

The funds created by the collected fines and forfeitures also are not indispensable parties. This is not an in rem proceeding, and the ownership of a particular stake is not in dispute. Rather, this is an action to compel a ministerial obligation imposed by law. Complete relief may be afforded without including the specified funds as a party.

K. *County is Entitled to Interest*

(28) State insists that an award of interest to County unfairly penalizes State for not paying claims which it was prohibited by law from paying under Statutes 1981, chapter 1090, section 3. This argument is unavailing.

[HN46]Civil Code section 3287, subdivision (a) allows interest to any person "entitled to recover damages certain, or capable of being made certain by calculation . . [***56] . ." Interest begins on the day that the right to recover vests in the claimant. By its own terms, this section applies to any judgment debtor, "including the state . . . or any political subdivision of the state."

The judgment orders interest at the legal rate from September 30, 1981, for reimbursement funds originally contained in S.B. 1261, and from February 12, 1982, for the funds originally contained in A.B. 171. These are the respective dates that the bills were enacted without appropriations. As we concluded earlier, County's cause of action did not arise and its right to recover did not vest until this legislative process was complete. County offers no authority to suggest that any other vesting date is appropriate.

Furthermore, State cannot avoid its obligation to pay interest by relying on the invalid budget control language in Statutes 1981, chapter 1090, section 3. [HN47]"An invalid statute voluntarily enacted and promulgated by the state is not a defense to its obligation to pay interest under Civil Code section 3287, subdivision (a)." (*Olson v. Cory* (1983) 35 Cal.3d 390, 404 [197 Cal.Rptr. 843, 673 P.2d 720].)

Appeal in Case No. 2 Civil B011941

(Rincon et [***57] al. Case)

The procedural history and legal issues raised in the *Rincon et al.* appeal are essentially similar to those discussed in the County of Los Angeles matter.

[*554] County, although not a party to this underlying trial court proceeding, filed a test claim with the Board. All parties agree that County represented the interests of the named respondents here.

The Board action resulted in a finding of state-mandated costs. It further found that Rincon et al. were entitled to reimbursement [**816] in the amount of $ 39,432. After the Legislature and the Governor, respectively, deleted the funding from the two appropriations bills, S.B. 1261 and A.B. 171, Rincon et al. filed a petition for writ of mandate and declaratory relief. This action was consolidated for hearing in the trial court with the action in B011942 (County of Los Angeles matter). The within judgment was also signed, filed and entered on February 6, 1985. The reimbursement order was directed against the 1984-1985 budget appropriations. State appeals from that judgment.

The court here included a judicial determination that the Board, or its successors, hear and approve the claims of certain other [***58] respondents for costs incurred in connection with the state-mandated program. (Fn. 7, para. 9, *ante.*) This special directive was necessary because the claims of these respondents (petitioners below) have not yet been determined. [23] Since we have ruled that State is barred by the doctrines of waiver and administrative collateral estoppel from raising the state mandate issue, the validity of these claims becomes a question of law susceptible to but one conclusion, and mandamus properly lies. (*County of Sacramento v. Loeb, supra,* 160 Cal.App.3d at p. 453.) This portion of the order also underscores, for the Board's edification, the determination that the statutory restriction on the Board authority to proceed is invalid. [24]

23 Responding to the budget control language directing it to refuse to process these claims, the Board declined to hear these matters.

24 Because certain claims have not yet been processed, we assume that the issue of the amount of reimbursement may still be at large. Our record is not clear on this point.

[***59] Once again, our determinations and conclusions in the County of Los Angeles matter are equally applicable here.

Appeal in Case No. 2 Civil B006078

(Carmel Valley et al.)

Again, the procedural history and legal issues raised in this appeal are essentially similar to those discussed in the County of Los Angeles matter.

County filed a test claim with the Board. All parties agree that the County represented the interests of the named respondents here.

[*555] On December 17, 1980, the Board found that a state mandate existed and that specific amounts of reimbursement were due several respondents totalling $ 159,663.80. Following the refusal of the Legislature to appropriate funds for reimbursement, Carmel Valley et al. filed a petition for writ of mandate and declaratory relief on January 3, 1983. Judgment was entered on May 23, 1984. The reimbursement order was directed against 1983-1984 budget appropriations.

The judgment differs from the other two because it does not decree a specific reimbursement amount. The trial court determined that even though the Board had approved the claims, the State was not precluded from contesting that determination. The court's reasons [***60] were that the State, in its answer, had denied that the money claimed was actually spent, and that Board approval had not been implemented by subsequent legislation. The court concluded that the reimbursement process, of which the Board action was an intrinsic part, was "aborted."

We disagree with this portion of the court's analysis. The moment S.B. 1261 and A.B. 171 were enacted into law without appropriations, Carmel Valley et al. had exhausted their administrative remedies and were entitled to seek a writ of mandate. At the time of trial, State was barred by the doctrines of waiver and administrative collateral estoppel from contesting the state mandate issue or the amount of reimbursement. The trial court therefore should have rendered a judgment for the amount of reimbursement. Having failed to do so, this fact-finding responsibility falls upon this court. Although we [**817] ordinarily are not equipped to handle this function, the writ of mandate in this case identifies the amount of the approved claims as $ 159,663.80. We accordingly will amend the judgment to reflect that amount.

The trial court also predicated its judgment for Carmel Valley et al. solely on the [***61] basis of Revenue and Taxation Code section 2207 and former section 2231. In doing so, the court did not have the benefit of the decision in *City of Sacramento v. State of California, supra,* 156 Cal.App.3d at p. 182. [25] That case held that mandates passed after January 1, 1975, must be reimbursed pursuant to article XIII B, section 6 of the California Constitution, but that reimbursement need not commence until July 1, 1980. In light of this rule, we

conclude that the trial court's decision ordering reimbursement is also supported by article XIII B, section 6.

25 The decision in *City of Sacramento, supra*, was filed just one day before the trial court signed the written order in this case. The Revenue and Taxation Code sections on which the court relied were operational before the costs claimed in this case were incurred.

[*556] State raises another point specific to this particular appeal. In its answer to the writ petition, State admitted that the local agency expenditures were state mandated. [***62] Consequently, the issue was not contested at the trial court level. However, State vigorously contends here that it is not bound by its trial court admissions because the state mandate issue is purely a question of law.

(29) State is correct in contending that [HN48]an appellate court is not limited by the interpretation of statutes given by the trial court. (*City of Merced* v. *State of California, supra*, 153 Cal.App.3d at p. 781.) However, State's victory on this point is Pyrrhic. Regardless of how the issue is characterized, State is precluded from contesting the Board findings on appeal because of the independent application of the doctrines of waiver and administrative collateral estoppel. These doctrines would also have applied at the trial court level if State's answer had raised the issue of state mandate in the first instance.

We also reject State's argument, advanced for the first time on appeal, that the executive orders of 1978 initially implement legislation enacted prior to January 1, 1975, and that state reimbursement is therefore discretionary. (Cal. Const., art. XIII B, § 6, subd. (c).) Again, State is barred by the doctrines of waiver and administrative collateral [***63] estoppel from arguing that costs incurred under the executive orders are not subject to reimbursement.

State continues that the *Carmel Valley* judgment against the Department of Industrial Relations is erroneous. Since the department was never made a party in the suit, nor served with process, the resulting judgment reflects a denial of due process and is in excess of the court's jurisdiction. (See Code Civ. Proc., § 389; fn. 22, *ante*.)

This assertion is but a variant of the same argument advanced in the County of Los Angeles case, *supra*, which we rejected as meritless. The department is part of the State of California. (Lab. Code, § 50.) State extensively argued the department's position and even offered into evidence a declaration from the chief of fiscal accounting of the department. As stated earlier, agents of the same government are in privity with each other. (*People* v. *Sims, supra*, 32 Cal.3d at p. 487.)

Ross v. *Superior Court, supra*, 19 Cal.3d at p. 899 demonstrates how, [HN49]through the notion of privity, a government agent can be held in contempt for knowingly violating a court order issued against another agent of the same government. There, [***64] a court in an earlier proceeding had decided that defendant Department of Health and Welfare must pay unlawfully withheld welfare benefits to qualified recipients. The County Board of Supervisors, [*557] who were not parties to this action, knew about the court's order but refused to comply. The Supreme Court affirmed a trial court decision holding the Board in contempt for violating the [**818] order directing payment. The court reasoned that, as an agent of the Department of Health and Welfare, the Board did not collectively or individually need to be named as a party in order to be bound by a court order of which they had actual knowledge.

The determinations and conclusions in the County of Los Angeles case are likewise applicable here.

Modification of Judgments in All Three Appeals

The trial court judgments ordering reimbursement from specific account appropriations were entered many months ago. We will affirm these judgments and thereby validate the trial courts' determination that funds already appropriated for the State Department of Industrial Relations were reasonably available for payment at the time of the courts' orders.

Due to the passage of time, we requested [***65] State at oral argument to confirm whether the appropriations designated in the respective judgments are still available for encumbrance. State's counsel responded by rearguing that the weight of the evidence did not support the trial courts' findings that specific funds were reasonably available for reimbursement. Counsel further hinted that the funds may not actually be available.

We hope that counsel for the State is mistaken. But in order to emphasize our strong and unequivocal determination that the local agency petitioners be promptly reimbursed, we will take judicial notice of the enactment of the 1985-1986 Budget Act (Stats. 1985, ch. 111) and the 1986-1987 Budget Act (Stats. 1986, ch. 186). (*Serrano* v. *Priest, supra*, 131 Cal.App.3d at p. 197.) Both acts appropriate money for the State Department of Industrial Relations and fund the identical account numbers referred to in the trial courts' judgments. They are:

Account Numbers	1985-1986 Budget Act	1986-1987 Budget Act
8350-001-001	$ 94,673,000	$ 106,153,000
8350-001-452	2,295,000	2,514,000
8350-001-453	2,859,000	2,935,000
8350-001-890	16,753,000	17,864,000

(30) [HN50]An appellate court is [***66] empowered to add a directive that the trial court order be modified to include charging orders against funds appropriated by subsequent budget acts. (*Serrano v. Priest, supra*, 131 Cal.App.3d at pp. 198, 201.) We do so here with respect to all three judgments.

[*558] *2d Civ. B011942 (County of Los Angeles Case)*

The judgment is modified as follows:

(1) The following sentence is added to paragraph 2: "If the hereinabove described funds are not available for reimbursement, the warrants shall be drawn against funds in the same account numbers enacted in the 1985-86 and 1986-87 Budget Acts."

(2) The words "Fish and Game Code Section 13100" are deleted from paragraph 5.

(3) The peremptory writ of mandate is modified to command the Controller to draw warrants, if necessary, against the same account numbers identified in the judgment as appropriated by the 1985-1986 and 1986-1987 Budget Acts.

As modified, the judgment is affirmed. Respondents to recover costs on appeal.

2d Civ. B011941 (Rincon et al. Case)

The judgment is modified as follows:

(1) The following sentence is added to paragraph 2: "If the hereinabove described funds are not available [***67] for reimbursement, the warrants shall be drawn against funds in the same account numbers enacted in the 1985-86 and 1986-87 Budget Acts."

[**819] (2) The peremptory writ of mandate is modified to command the Controller to draw warrants, if necessary, against the same account numbers identified in the judgment as appropriated by the 1985-1986 and 1986-1987 Budget Acts.

As modified, the judgment is affirmed. Respondents to recover costs on appeal.

2d Civ. B006078 (Carmel Valley et al. Case)

The judgment is modified as follows:

[*559] (1) The following sentences are added to paragraph 2: "The reimbursement amounts total $ 159,663.80. If the hereinabove described funds are not available for reimbursement, the warrants shall be drawn against funds in the same account numbers enacted in the 1985-86 and 1986-87 Budget Acts."

(2) The peremptory writ of mandate is modified to command the Controller to draw warrants, if necessary, against the same account numbers identified in the judgment as appropriated by the 1985-1986 and 1986-1987 Budget Acts.

As modified, the judgment is affirmed. Respondents to recover costs on appeal.

TAB "8"

LEXSEE

Positive
As of: Jun 17, 2010

CITY OF BURBANK, Plaintiff and Appellant, v. STATE WATER RESOURCES CONTROL BOARD et al., Defendants and Appellants. CITY OF LOS ANGELES, Plaintiff and Respondent, v. STATE WATER RESOURCES CONTROL BOARD et al., Defendants and Appellants.

S119248

SUPREME COURT OF CALIFORNIA

35 Cal. 4th 613; 108 P.3d 862; 26 Cal. Rptr. 3d 304; 2005 Cal. LEXIS 3486; 60 ERC (BNA) 1470; 2005 Cal. Daily Op. Service 2861; 2005 Daily Journal DAR 3870; 35 ELR 20071

April 4, 2005, Filed

SUBSEQUENT HISTORY: Time for Granting or Denying Rehearing Extended Burbank, City of v. State Water Resources Control Board, 2005 Cal. LEXIS 4271 (Cal., Apr. 21, 2005)
Rehearing denied by, Request denied by City of Burbank v. State Water Res. Control Bd., 2005 Cal. LEXIS 7185 (Cal., June 29, 2005)

PRIOR HISTORY: Superior Court of Los Angeles County, Nos. BS060960, BS060957, Dzintra I. Janavs, Judge. Court of Appeal, Second Dist., Div. Three, Nos. B150912, B151175 & B152562.
City of Burbank v. State Water Resources Control Bd., 111 Cal. App. 4th 245, 4 Cal. Rptr. 3d 27, 2003 Cal. App. LEXIS 1236 (Cal. App. 2d Dist., 2003)

DISPOSITION: Judgment affirmed in part and remanded in part..

CASE SUMMARY:

PROCEDURAL POSTURE: Plaintiff cities sought review of a judgment of the Court of Appeal of California, Second Appellate District, Division Three, holding that Cal. Water Code §§ 13241 and 13263 required a regional water control quality board to take into account economic considerations when it adopted water quality standards in a basin plan but not when the board set specific pollutant restrictions in wastewater discharge permits intended to satisfy those standards.

OVERVIEW: The cities owned three treatment plants that discharged wastewater under National Pollutant Discharge Elimination System permits issued by the regional board. The court held that whether the regional board should have complied with Cal. Water Code §§ 13263 and 13241 of California's Porter-Cologne Water Quality Control Act, Cal. Water Code § 13000 et seq., by taking into account "economic considerations," such as the costs the permit holder would incur to comply with the numeric pollutant restrictions set out in the permits depended on whether those restrictions met or exceeded the requirements of the federal Clean Water Act, 33 U.S.C.S. § 1251 et seq. To comport with the principles of federal supremacy, California law could not authorize California's regional boards to allow the discharge of pollutants into the navigable waters of the United States in concentrations that would exceed the mandates of federal law. The federal Clean Water Act did not prohibit a state, when imposing effluent limitations that were more stringent than required by federal law, from taking into account the economic effects of doing so.

OUTCOME: The court affirmed the judgment of the court of appeal, reinstating the wastewater discharge permits to the extent that the specified numeric limitations on chemical pollutants were necessary to satisfy federal Clean Water Act requirements for treated waste-

water. The court remanded for further proceedings to determine whether the pollutant limitations in the permits met or exceeded federal standards.

CORE TERMS: water quality, wastewater, regional boards, pollutant, Clean Water Act, effluent, federal law, basin, plant's, stringent', pollution, discharged, economic factors, narrative, federal standards, clean, Porter-Cologne Act, numeric, beneficial uses, concentration, navigable waters, regional, river, issuing, Conservation Laws, point sources, environmental, authorize, chemical, Control Act

LexisNexis(R) Headnotes

Environmental Law > Water Quality > General Overview
Real Property Law > Water Rights > Beneficial Use
[HN1]Whereas the State Water Resources Control Board establishes statewide policy for water quality control, Cal. Water Code § 13140, the regional boards formulate and adopt water quality control plans for all areas within a region. Cal. Water Code § 13240. The regional boards' water quality plans, called "basin plans," must address the beneficial uses to be protected as well as water quality objectives, and they must establish a program of implementation. Cal. Water Code § 13050(j). Basin plans must be consistent with state policy for water quality control. Cal. Water Code § 13240.

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > Effluent Limitations
Environmental Law > Water Quality > Clean Water Act > Enforcement > General Overview
[HN2]Under the federal Clean Water Act, 33 U.S.C.S. § 1251 et seq., each state is free to enforce its own water quality laws so long as its effluent limitations are not less stringent than those set out in the Clean Water Act. 33 U.S.C.S. § 1370.

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > Effluent Limitations
Environmental Law > Water Quality > Clean Water Act > Water Quality Standards
[HN3]The Clean Water Act, 33 U.S.C.S. § 1251 et seq., provides for two sets of water quality measures. Effluent limitations are promulgated by the Environmental Protection Agency and restrict the quantities, rates, and concentrations of specified substances which are discharged from point sources. 33 U.S.C.S. §§ 1311, 1314. Water quality standards are, in general, promulgated by the states and establish the desired condition of a waterway. 33 U.S.C.S. § 1313. These standards supplement effluent limitations so that numerous point sources, despite individual compliance with effluent limitations, may be further regulated to prevent water quality from falling below acceptable levels.

Environmental Law > Water Quality > Clean Water Act > Coverage & Definitions > Point Sources
[HN4]See 33 U.S.C.S. § 1362(14).

Environmental Law > Water Quality > Clean Water Act > Water Quality Standards
[HN5]The Environmental Protection Agency (EPA) provides states with substantial guidance in the drafting of water quality standards. Moreover, the Clean Water Act, 33 U.S.C.S. § 1251 et seq., requires, inter alia, that state authorities periodically review water quality standards and secure the EPA's approval of any revisions in the standards. If the EPA recommends changes to the standards and the state fails to comply with that recommendation, the Act authorizes the EPA to promulgate water quality standards for the state. 33 U.S.C.S. § 1313(c).

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > Effluent Limitations
Environmental Law > Water Quality > Clean Water Act > Enforcement > General Overview
[HN6]Part of the federal Clean Water Act, 33 U.S.C.S. § 1251 et seq., is the National Pollutant Discharge Elimination System (NPDES), the primary means for enforcing effluent limitations and standards under the Clean Water Act. The NPDES sets out the conditions under which the federal Environmental Protection Agency or a state with an approved water quality control program can issue permits for the discharge of pollutants in wastewater. 33 U.S.C.S. § 1342(a), (b). In California, wastewater discharge requirements established by the regional boards are the equivalent of the NPDES permits required by federal law. Cal. Water Code § 13374.

Environmental Law > Water Quality > General Overview
Real Property Law > Water Rights > Beneficial Use
[HN7]See Cal. Water Code § 13263(a).

Environmental Law > Water Quality > General Overview
Real Property Law > Water Rights > Beneficial Use
[HN8]See Cal. Water Code § 13241.

Governments > Legislation > Interpretation
[HN9]When construing any statute, the reviewing court's task is to determine the legislature's intent when it enacted the statute so that the court may adopt the construction that best effectuates the purpose of the law. In doing this, the court looks to the statutory language, which ordinarily is the most reliable indicator of legislative intent.

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > Effluent Limitations
[HN10]Cal. Water Code § 13263 directs regional boards, when issuing wastewater discharge permits, to take into account various factors including those set out in Cal. Water Code § 13241. Listed among the § 13241 factors is economic considerations. Cal. Water Code § 13241(d).

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > Effluent Limitations
[HN11]Cal. Water Code § 13377 specifies that wastewater discharge permits issued by California's regional boards must meet the federal standards set by federal law. In effect, § 13377 forbids a regional board's consideration of any economic hardship on the part of the permit holder if doing so would result in the dilution of the requirements set by Congress in the Clean Water Act. That act prohibits the discharge of pollutants into the navigable waters of the United States unless there is compliance with federal law, 33 U.S.C.S. § 1311(a), and publicly operated wastewater treatment plants must comply with the act's clean water standards, regardless of cost. 33 U.S.C.S. §§ 1311(a), (b)(1)(B), (C), 1342(a)(1), (3).

Constitutional Law > Supremacy Clause > General Overview
Environmental Law > Water Quality > General Overview
[HN12]Because Cal. Water Code § 13263 cannot authorize what federal law forbids, it cannot authorize a regional board, when issuing a wastewater discharge permit, to use compliance costs to justify pollutant restrictions that do not comply with federal clean water standards. Such a construction of § 13263 would not only be inconsistent with federal law, it would also be inconsistent with the Legislature's declaration in Cal. Water Code § 13377 that all discharged wastewater must satisfy federal standards. Moreover, under the federal Constitution's Supremacy Clause, U.S. Const. art. VI, cl. 2, a state law that conflicts with federal law is without effect. To comport with the principles of federal supremacy, California law cannot authorize the state's regional boards to allow the discharge of pollutants into the navigable waters of the United States in concentrations that would exceed the mandates of federal law.

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > Effluent Limitations
Environmental Law > Water Quality > Clean Water Act > Enforcement > General Overview
[HN13]The federal Clean Water Act, 33 U.S.C.S. § 1251 et seq., reserves to the states significant aspects of water quality policy, 33 U.S.C.S. § 1251(b), and it specifically grants the states authority to "enforce any effluent limitation" that is not "less stringent" than the federal standard, 33 U.S.C.S. § 1370. It does not prescribe or restrict the factors that a state may consider when exercising this reserved authority, and thus it does not prohibit a state-when imposing effluent limitations that are more stringent than required by federal law-from taking into account the economic effects of doing so.

SUMMARY:

CALIFORNIA OFFICIAL REPORTS SUMMARY

The trial court ruled that California law required a regional water quality control board to weigh the economic burden on a wastewater treatment facility against the expected environmental benefits of reducing pollutants in the wastewater discharge. The cities owned three treatment plants that discharged wastewater under National Pollutant Discharge Elimination System permits issued by the regional board. (Superior Court of Los Angeles County, Nos. BS060960 and BS060957, Dzintra I. Janavs, Judge.) The Court of Appeal, Second Dist., Div. Three, Nos. B150912, B151175 and B152562, concluded that Wat. Code, §§ 13241 and 13263, required a regional board to take into account "economic considerations" when it adopted water quality standards in a basin plan but not when the regional board set specific pollutant restrictions in wastewater discharge permits intended to satisfy those standards.

The Supreme Court affirmed the judgment of the Court of Appeal, reinstating the wastewater discharge permits in part and remanding for further proceedings. The court held that whether the regional board should have complied with Wat. Code, §§ 13263 and 13241, of California's Porter-Cologne Water Quality Control Act, Wat. Code, § 13000 et seq., by taking into account "economic considerations," such as the costs the permit holder would incur to comply with the numeric pollutant restrictions set out in the permits, depended on whether those restrictions met or exceeded the requirements of

the federal Clean Water Act, 33 U.S.C. § 1251 et seq. To comport with the principles of federal supremacy, California law could not authorize California's regional boards to allow the discharge of pollutants into the navigable waters of the United States in concentrations that would exceed the mandates of federal law. The federal Clean Water Act did not prohibit a state, when imposing effluent limitations that were more stringent than required by [*614] federal law, from taking into account the economic effects of doing so. (Opinion by Kennard, J., with George, C. J., Baxter, Werdegar, Chin, and Moreno, JJ., concurring. Concurring opinion by Brown, J. (see p. 629).)

HEADNOTES

CALIFORNIA OFFICIAL REPORTS HEADNOTES
Classified to California Digest of Official Reports

(1) Pollution and Conservation Laws § 5--Water--"Basin Plans."--Whereas the State Water Resources Control Board establishes statewide policy for water quality control, Wat. Code, § 13140, the regional boards formulate and adopt water quality control plans for all areas within a region, Wat. Code, § 13240. Under Wat. Code, § 13050, subd. (j), the regional boards' water quality plans, called "basin plans," must address the beneficial uses to be protected as well as water quality objectives, and they must establish a program of implementation. Basin plans must be consistent with state policy for water quality control under Wat. Code, § 13240.

(2) Pollution and Conservation Laws § 5--Water--Federal and State Standards.--Under 33 U.S.C. § 1370, of the federal Clean Water Act, 33 U.S.C. § 1251 et seq., each state is free to enforce its own water quality laws so long as its effluent limitations are not less stringent than those set out in the Clean Water Act.

(3) Pollution and Conservation Laws § 5--Water--Federal and State Standards.--The Clean Water Act, 33 U.S.C. § 1251 et seq., provides for two sets of water quality measures. Pursuant to 33 U.S.C. §§ 1311 and 1314, effluent limitations are promulgated by the Environmental Protection Agency and restrict the quantities, rates, and concentrations of specified substances which are discharged from point sources. Water quality standards are, in general, promulgated by the states and establish the desired condition of a waterway under 33 U.S.C. § 1313. These standards supplement effluent limitations so that numerous point sources, despite individual compliance with effluent limitations, may be further regulated to prevent water quality from falling below acceptable levels.

(4) Pollution and Conservation Laws § 5--Water--Federal and State Standards.--The Environmental Protection Agency (EPA) provides states with substantial guidance in the drafting of water quality standards. Moreover, the Clean Water Act, 33 U.S.C. § 1251 et seq., requires, inter alia, that state authorities periodically review water quality [*615] standards and secure the EPA's approval of any revisions in the standards. If the EPA recommends changes to the standards and the state fails to comply with that recommendation, 33 U.S.C. § 1313(c), authorizes the EPA to promulgate water quality standards for the state.

(5) Pollution and Conservation Laws § 5--Water--National Pollutant Discharge Elimination System.--Part of the federal Clean Water Act, 33 U.S.C. § 1251 et seq., is the National Pollutant Discharge Elimination System (NPDES), the primary means for enforcing effluent limitations and standards under the Clean Water Act. Title 33 U.S.C. § 1342(a), (b), of the NPDES sets out the conditions under which the federal Environmental Protection Agency or a state with an approved water quality control program can issue permits for the discharge of pollutants in wastewater. Under California law, Wat. Code, § 13374, wastewater discharge requirements established by the regional boards are the equivalent of the NPDES permits required by federal law.

(6) Statutes § 21--Construction--Legislative Intent.--When construing any statute, the reviewing court's task is to determine the Legislature's intent when it enacted the statute so that the court may adopt the construction that best effectuates the purpose of the law. In doing this, the court looks to the statutory language, which ordinarily is the most reliable indicator of legislative intent.

(7) Pollution and Conservation Laws § 5--Water--Wastewater Discharge Permits--Economic Considerations.--Wat. Code, § 13263, directs regional boards, when issuing wastewater discharge permits, to take into account various factors, including those set out in Wat. Code, § 13241. Listed among the § 13241 factors is economic considerations, in § 13241, subd. (d).

(8) Pollution and Conservation Laws § 5--Water--Wastewater Discharge Permits--Economic Considerations.--Wat. Code, § 13377, specifies that wastewater discharge permits issued by California's regional boards must meet the federal standards set by federal law. In effect, § 13377 forbids a regional board's consideration of any economic hardship on the part of the permit holder if doing so would result in the dilution of the requirements set by Congress in the Clean Water

Act. That act prohibits the discharge of pollutants into the navigable waters of [*616] the United States unless there is compliance with federal law (33 U.S.C. § 1311(a)), and publicly operated wastewater treatment plants must comply with the act's clean water standards under 33 U.S.C. §§ 1311(a), (b)(1)(B) and (C), 1342(a)(1) and (3), regardless of cost.

(9) Pollution and Conservation Laws § 5--Water--Wastewater Discharge Permits--Economic Considerations.--Because Wat. Code, § 13263, cannot authorize what federal law forbids, it cannot authorize a regional board, when issuing a wastewater discharge permit, to use compliance costs to justify pollutant restrictions that do not comply with federal clean water standards. Such a construction of § 13263 would not only be inconsistent with federal law, it would also be inconsistent with the Legislature's declaration in Wat. Code, § 13377, that all discharged wastewater must satisfy federal standards. Moreover, under the federal Constitution's supremacy clause, U.S. Const., art. VI, a state law that conflicts with federal law is without effect. To comport with the principles of federal supremacy, California law cannot authorize the state's regional boards to allow the discharge of pollutants into the navigable waters of the United States in concentrations that would exceed the mandates of federal law.

(10) Pollution and Conservation Laws § 5--Water--Federal and State Standards.--The federal Clean Water Act, 33 U.S.C. § 1251 et seq., reserves to the states significant aspects of water quality policy under 33 U.S.C. § 1251(b), and it specifically grants the states authority to enforce any effluent limitation that is not less stringent than the federal standard under 33 U.S.C. § 1370. It does not prescribe or restrict the factors that a state may consider when exercising this reserved authority, and thus it does not prohibit a state--when imposing effluent limitations that are more stringent than required by federal law--from taking into account the economic effects of doing so. Thus, a regional board, when issuing a wastewater discharge permit, may not consider economic factors to justify imposing pollutant restrictions that are less stringent than the applicable federal standards require. When, however, a regional board is considering whether to make the pollutant restrictions in a wastewater discharge permit more stringent than federal law requires, California law allows the board to take into account economic factors, including the wastewater discharger's cost of compliance.

[4 Witkin, Summary of Cal. Law (9th ed. 1987) Real Property, §§ 68, 69.] [*617]

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JUDGES: Kennard, J., with George, C. J., Baxter, Werdegar, Chin, and Moreno, JJ., concurring. Concurring opinion by Brown, J.

OPINION BY: KENNARD [**864]

OPINION

KENNARD, J.--Federal law establishes national water quality standards but allows the states to enforce their own water quality laws so long as they comply with federal standards. Operating within this federal-state framework, California's nine Regional Water Quality Control Boards establish water quality policy. They also issue permits for the discharge of treated wastewater; these permits specify the maximum allowable concentration of chemical pollutants in the discharged wastewater.

The question here is this: When a regional board issues a permit to a wastewater treatment facility, must the board take into account the facility's costs of complying with the board's restrictions on pollutants in the wastewater to be discharged? The trial court ruled that California law required a regional board to weigh the economic burden on the facility against the expected environmental benefits of reducing pollutants in the wastewater discharge. The Court of Appeal disagreed. On petitions by the municipal operators of three wastewater treatment facilities, we granted review.

We reach the following conclusions: Because both California law and federal law require regional boards to comply with federal clean water standards, and because the supremacy clause of the United States Constitution requires state law to yield to federal law, a regional board, when issuing a wastewater discharge permit, may not consider economic factors to justify imposing pollutant restrictions that are *less stringent* than the applicable federal standards require. When, however, a regional board is considering whether to make the pollutant restrictions in a wastewater discharge permit *more stringent* than federal law requires, California law allows the board to take into account economic [**865] factors, including the wastewater discharger's cost of compliance. We remand this case for further proceedings to determine whether the pollutant limitations in the permits challenged here meet or exceed federal standards.

[*619] **I. Statutory Background**

The quality of our nation's waters is governed by a "complex statutory and regulatory scheme ... that implicates both federal and state administrative responsibilities." (*PUD No. 1 of Jefferson County v. Washington Department of Ecology* (1994) 511 U.S. 700, 704 [128 L. Ed. 2d 716, 114 S. Ct. 1900].) We first discuss California law, then federal law.

A. California Law

In California, the controlling law is the Porter-Cologne Water Quality Control Act (Porter-Cologne Act), which was enacted in 1969. (Wat. Code, § 13000 et seq., added by Stats. 1969, ch. 482, § 18, p. 1051.) [1] Its goal is "to attain the highest water [***307] quality which is reasonable, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible." (§ 13000.) The task of accomplishing this belongs to the State Water Resources Control Board (State Board) and the nine Regional Water Quality Control Boards; together the State Board and the regional boards comprise "the principal state agencies with primary responsibility for the coordination and control of water quality." (§ 13001.) As relevant here, one of those regional boards oversees the Los Angeles region (the Los Angeles Regional Board). [2]

1 Further undesignated statutory references are to the Water Code.

2 The Los Angeles water region "comprises all basins draining into the Pacific Ocean between the southeasterly boundary, located in the westerly part of Ventura County, of the watershed of Rincon Creek and a line which coincides with the southeasterly boundary of Los Angeles County from the ocean to San Antonio Peak and follows thence the divide between San Gabriel River and Lytle Creek drainages to the divide between Sheep Creek and San Gabriel River drainages." (§ 13200, subd. (d).)

(1) [HN1]Whereas the State Board establishes statewide policy for water quality control (§ 13140), the regional boards "formulate and adopt water quality control plans for all areas within [a] region" (§ 13240). The regional boards' water quality plans, called "basin plans," must address the beneficial uses to be protected as well as water quality objectives, and they must establish a program of implementation. (§ 13050, subd. (j).) Basin

plans must be consistent with "state policy for water quality control." (§ 13240.)

B. Federal Law

In 1972, Congress enacted amendments (Pub.L. No. 92-500 (Oct. 18, 1972) 86 Stat. 816) to the Federal Water Pollution Control Act (33 U.S.C. § 1251 et seq.), which, as amended in 1977, is commonly known as the Clean [*620] Water Act. The Clean Water Act is a "comprehensive water quality statute designed to 'restore and maintain the chemical, physical, and biological integrity of the Nation's waters.' " (*PUD No. 1 of Jefferson County v. Washington Dept. of Ecology, supra*, 511 U.S. at p. 704, quoting 33 U.S.C. § 1251(a).) The act's national goal was to eliminate by the year 1985 "the discharge of pollutants into the navigable waters" of the United States. (33 U.S.C. § 1251(a)(1).) To accomplish this goal, the act established "effluent limitations," which are restrictions on the "quantities, rates, and concentrations of chemical, physical, biological, and other constituents"; these effluent limitations allow the discharge of pollutants only when the water has been satisfactorily treated to conform with federal water quality standards. (33 U.S.C. §§ 1311, 1362(11).)

(2) [HN2]Under the federal Clean Water Act, each state is free to enforce its own water quality laws so long as its effluent limitations are not "less stringent" than those set out in the Clean Water Act. (33 U.S.C. § 1370.) This led the California Legislature in 1972 to amend the state's Porter-Cologne Act "to ensure consistency with the requirements for state programs implementing the Federal Water Pollution Control Act." (§ 13372.)

[**866] **(3)** Roughly a dozen years ago, the United States Supreme Court, in *Arkansas v. Oklahoma* (1992) 503 U.S. 91 [117 L. Ed. 2d 239, 112 S. Ct. 1046], described the distinct roles of the state and federal agencies in enforcing water quality: "The Clean Water Act anticipates a partnership between the States and the Federal Government, animated by a shared objective: 'to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.' 33 U.S.C. § 1251(a). Toward [***308] this end, [HN3][the Clean Water Act] provides for two sets of water quality measures. 'Effluent limitations' are promulgated by the [Environmental Protection Agency (EPA)] and restrict the quantities, rates, and concentrations of specified substances which are discharged from point sources.[3] See §§ 1311, 1314. '[W]ater quality standards' are, in general, promulgated by the States and establish the desired condition of a waterway. See § 1313. These standards supplement effluent limitations 'so that numerous point sources, despite individual compliance with effluent limitations, may be further regulated to prevent water quality from falling below acceptable levels.' *EPA v. California ex rel. State Water Resources Control Bd.*, 426 U.S. 200, 205, n. 12 [48 L. Ed. 2d 578, 96 S. Ct. 2022, 2025, n. 12] (1976).

3 A "[HN4]point source" is "any discernible, confined and discrete conveyance" and includes "any pipe, ditch, channel ... from which pollutants ... may be discharged." (33 U.S.C. § 1362 (14).)

[*621] **(4)** "[HN5]The EPA provides States with substantial guidance in the drafting of water quality standards. See generally 40 CFR pt. 131 (1991) (setting forth model water quality standards). Moreover, [the Clean Water Act] requires, *inter alia*, that state authorities periodically review water quality standards and secure the EPA's approval of any revisions in the standards. If the EPA recommends changes to the standards and the State fails to comply with that recommendation, the Act authorizes the EPA to promulgate water quality standards for the State. 33 U.S.C. § 1313(c)." (*Arkansas v. Oklahoma, supra*, 503 U.S. at p. 101.)

(5) [HN6]Part of the federal Clean Water Act is the National Pollutant Discharge Elimination System (NPDES), "[t]he primary means" for enforcing effluent limitations and standards under the Clean Water Act. (*Arkansas v. Oklahoma, supra*, 503 U.S. at p. 101.) The NPDES sets out the conditions under which the federal EPA or a state with an approved water quality control program can issue permits for the discharge of pollutants in wastewater. (33 U.S.C. § 1342(a) & (b).) In California, wastewater discharge requirements established by the regional boards are the equivalent of the NPDES permits required by federal law. (§ 13374.)

With this federal and state statutory framework in mind, we now turn to the facts of this case.

II. Factual Background

This case involves three publicly owned treatment plants that discharge wastewater under NPDES permits issued by the Los Angeles Regional Board.

The City of Los Angeles owns and operates the Donald C. Tillman Water Reclamation Plant (Tillman Plant), which serves the San Fernando Valley. The City of Los Angeles also owns and operates the Los Angeles-Glendale Water Reclamation Plant (Los Angeles-Glendale Plant), which processes wastewater from areas within the City of Los Angeles and the independent cities of Glendale and Burbank. Both the Tillman Plant and the Los Angeles-Glendale Plant discharge wastewater directly into the Los Angeles River, now a concrete-lined flood control channel that runs through the City of Los Angeles, ending at the Pacific Ocean. The State Board and the Los Angeles Regional Board consider the Los Angeles River to be a navigable water of

the United States for purposes of the federal Clean Water Act.

The third plant, the Burbank Water Reclamation Plant (Burbank Plant), is owned and operated by the City of Bur [***309] bank, serving residents and businesses within that city. The Burbank Plant discharges wastewater into the Burbank Western Wash, which drains into the Los Angeles River.

[*622] All three plants, which together process hundreds of millions of gallons of sewage [**867] each day, are tertiary treatment facilities; that is, the treated wastewater they release is processed sufficiently to be safe not only for use in watering food crops, parks, and playgrounds, but also for human body contact during recreational water activities such as swimming.

In 1998, the Los Angeles Regional Board issued renewed NPDES permits to the three wastewater treatment facilities under a basin plan it had adopted four years earlier for the Los Angeles River and its estuary. That 1994 basin plan contained general narrative criteria pertaining to the existing and potential future beneficial uses and water quality objectives for the river and estuary. [4] The narrative criteria included municipal and domestic water supply, swimming and other recreational water uses, and fresh water habitat. The plan further provided: "All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life." The 1998 permits sought to reduce these narrative criteria to specific numeric requirements setting daily maximum limitations for more than 30 pollutants present in the treated wastewater, measured in milligrams or micrograms per liter of effluent. [5]

4 This opinion uses the terms "narrative criteria" or descriptions, and "numeric criteria" or effluent limitations. Narrative criteria are broad statements of desirable water quality goals in a water quality plan. For example, "no toxic pollutants in toxic amounts" would be a narrative description. This contrasts with numeric criteria, which detail specific pollutant concentrations, such as parts per million of a particular substance.

5 For example, the permits for the Tillman and Los Angeles-Glendale Plants limited the amount of fluoride in the discharged wastewater to 2 milligrams per liter and the amount of mercury to 2.1 micrograms per liter.

The Cities of Los Angeles and Burbank (Cities) filed appeals with the State Board, contending that achievement of the numeric requirements would be too costly when considered in light of the potential benefit to water quality, and that the pollutant restrictions in the NPDES permits were unnecessary to meet the narrative criteria described in the basin plan. The State Board summarily denied the Cities' appeals.

Thereafter, the Cities filed petitions for writs of administrative mandate in the superior court. They alleged, among other things, that the Los Angeles Regional Board failed to comply with sections 13241 and 13263, part of California's Porter-Cologne Act, because it did not consider the economic burden on the Cities in having to reduce substantially the pollutant content of their discharged wastewater. They also alleged that compliance with the pollutant restrictions set out in the NPDES permits issued by the regional [*623] board would greatly increase their costs of treating the wastewater to be discharged into the Los Angeles River. According to the City of Los Angeles, its compliance costs would exceed $ 50 million annually, representing more than 40 percent of its entire budget for operating its four wastewater treatment plants and its sewer system; the City of Burbank estimated its added costs at over $ 9 million annually, a nearly 100 percent increase above its $ 9.7 million annual budget for wastewater treatment.

[***310] The State Board and the Los Angeles Regional Board responded that sections 13241 and 13263 do not require consideration of costs of compliance when a regional board issues a NPDES permit that restricts the pollutant content of discharged wastewater.

The trial court stayed the contested pollutant restrictions for each of the three wastewater treatment plants. It then ruled that sections 13241 and 13263 of California's Porter-Cologne Act required a regional board to consider costs of compliance not only when it adopts a basin or water quality plan but also when, as here, it issues an NPDES permit setting the allowable pollutant content of a treatment plant's discharged wastewater. The court found no evidence that the Los Angeles Regional Board had considered economic factors at either stage. Accordingly, the trial court granted the Cities' petitions for writs of mandate, and it ordered the Los Angeles Regional Board to vacate the contested restrictions on pollutants in the wastewater discharge permits issued to the three municipal plants here and to conduct hearings [**868] to consider the Cities' costs of compliance before the board's issuance of new permits. The Los Angeles Regional Board and the State Board filed appeals in both the Los Angeles and Burbank cases. [6]

6 Unchallenged on appeal and thus not affected by our decision are the trial court's rulings that (1) the Los Angeles Regional Board failed to show how it derived from the narrative criteria in the governing basin plan the specific numeric pollutant limitations included in the permits; (2)

the administrative record failed to support the specific effluent limitations; (3) the permits improperly imposed daily maximum limits rather than weekly or monthly averages; and (4) the permits improperly specified the manner of compliance.

The Court of Appeal, after consolidating the cases, reversed the trial court. It concluded that sections 13241 and 13263 require a regional board to take into account "economic considerations" when it adopts water quality standards in a basin plan but not when, as here, the regional board sets specific pollutant restrictions in wastewater discharge permits intended to satisfy those standards. We granted the Cities' petition for review.

[*624] **III. Discussion**

A. Relevant State Statutes

The California statute governing the issuance of *wastewater permits* by a regional board is section 13263, which was enacted in 1969 as part of the Porter-Cologne Act. (See *ante*, at p. 619.) Section 13263 provides in relevant part: "[HN7]*The regional board*, after any necessary hearing, *shall prescribe requirements as to the nature of any proposed discharge* [of wastewater]. *The requirements* shall implement any relevant water quality control plans that have been adopted, and *shall take into consideration* the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and *the provisions of Section 13241*." (§ 13263, subd. (a), italics added.)

Section 13241 states: "[HN8]Each regional board shall establish such water quality objectives in water quality control plans as in its judgment will ensure the reasonable protection of beneficial uses and the prevention of nuisance; however, it is recognized that it may be possible for the quality of water to be changed to some degree without unreasonably affecting beneficial uses. Factors to be considered by a regional board in establishing water quality objectives shall include, but not necessarily be limited to, all of the following:

[***311] "(a) Past, present, and probable future beneficial uses of water.

"(b) Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto.

"(c) Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area.

"(d) *Economic considerations.*

"(e) The need for developing housing within the region.

"(f) The need to develop and use recycled water." (Italics added.)

The Cities here argue that section 13263's express reference to section 13241 requires the Los Angeles Regional Board to consider section 13241's listed factors, notably "[e]conomic considerations," before issuing NPDES permits requiring specific pollutant reductions in discharged effluent or treated wastewater.

[*625] Thus, at issue is language in section 13263 stating that when a regional board "prescribe[s] requirements as to the nature of any proposed discharge" of treated wastewater it must "take into consideration" certain factors including "the provisions of Section 13241." According to the Cities, this statutory language requires that a regional board make an independent evaluation of the section 13241 factors, including "economic considerations," before restricting the pollutant content in an NPDES permit. This was the view expressed in the trial court's ruling. The Court of Appeal rejected that view. It held that a regional board need consider the section 13241 factors only when it adopts a basin or water quality plan, but not when, as in this case, it issues a wastewater discharge [**869] permit that sets specific numeric limitations on the various chemical pollutants in the wastewater to be discharged. As explained below, the Court of Appeal was partly correct.

B. Statutory Construction

(6) [HN9]When construing any statute, our task is to determine the Legislature's intent when it enacted the statute "so that we may adopt the construction that best effectuates the purpose of the law." (*Hassan v. Mercy American River Hospital* (2003) 31 Cal.4th 709, 715 [3 Cal. Rptr. 3d 623, 74 P.3d 726]; see *Esberg v. Union Oil Co.* (2002) 28 Cal.4th 262, 268 [121 Cal. Rptr. 2d 203, 47 P.3d 1069].) In doing this, we look to the statutory language, which ordinarily is "the most reliable indicator of legislative intent." (*Hassan, supra*, at p. 715.)

(7) As mentioned earlier, our Legislature's 1969 enactment of the Porter-Cologne Act, which sought to ensure the high quality of water in this state, predated the 1972 enactment by Congress of the precursor to the federal Clean Water Act. Included in California's original Porter-Cologne Act were sections 13263 and 13241. [HN10]Section 13263 directs regional boards, when issuing wastewater discharge permits, to take into account various factors, including those set out in section 13241. Listed among the section 13241 factors is "[e]conomic considerations." (§ 13241, subd. (d).) The plain language of sections 13263 and 13241 indicates the Legislature's intent in 1969, when these statutes were enacted, that a

regional board consider the cost of compliance when setting effluent limitations in a wastewater discharge permit.

Our construction of sections 13263 and 13241 does not end with their plain statutory language, however. We must also analyze them in the context of the statutory scheme of which they are a part. (*State Farm Mutual Automobile Ins. Co. v. Garamendi* (2004) 32 Cal.4th 1029, 1043 [12 [***312] Cal. Rptr. 3d 343, 88 P.3d 71].) Like sections 13263 and 13241, section 13377 is part of the Porter-Cologne Act. But unlike the former two statutes, section 13377 was [*626] not enacted until 1972, shortly after Congress, through adoption of the Federal Water Pollution Control Act Amendments, established a comprehensive water quality policy for the nation.

(8) [HN11]Section 13377 specifies that wastewater discharge permits issued by California's regional boards must meet the federal standards set by federal law. In effect, section 13377 forbids a regional board's consideration of any economic hardship on the part of the permit holder if doing so would result in the dilution of the requirements set by Congress in the Clean Water Act. That act prohibits the discharge of pollutants into the navigable waters of the United States unless there is compliance with federal law (33 U.S.C. § 1311(a)), and publicly operated wastewater treatment plants such as those before us here must comply with the act's clean water standards, regardless of cost (see *id.*, §§ 1311(a), (b)(1)(B) & (C), 1342(a)(1) & (3)). [HN12]**(9)** Because section 13263 cannot authorize what federal law forbids, it cannot authorize a regional board, when issuing a wastewater discharge permit, to use compliance costs to justify pollutant restrictions that do not comply with federal clean water standards. [7] Such a construction of section 13263 would not only be inconsistent with federal law, it would also be inconsistent with the Legislature's [**870] declaration in section 13377 that all discharged wastewater must satisfy federal standards. [8] This was also the conclusion of the Court of Appeal. Moreover, under the federal Constitution's supremacy clause (art. VI), a state law that conflicts with federal law is " 'without effect.' " (*Cipollone v. Liggett Group, Inc.* (1992) 505 U.S. 504, 516 [120 L. Ed. 2d 407, 112 S. Ct. 2608]; see *Dowhal v. SmithKline Beecham Consumer Healthcare* (2004) 32 Cal.4th 910, 923 [12 Cal. Rptr. 3d 262, 88 P.3d 1].) To comport with the principles of federal supremacy, California law cannot authorize this [*627] state's regional boards to allow the discharge of pollutants into the navigable waters of the United States in concentrations that would exceed the mandates of federal law.

7 The concurring opinion misconstrues both state and federal clean water law when it describes the issue here as "whether the Clean Water Act prevents or prohibits the regional water board from considering economic factors to justify pollutant restrictions *that meet the clean water standards in more cost-effective and economically efficient ways*." (Conc. opn. of Brown, J., *post*, at p. 629, some italics added.) This case has nothing to do with meeting federal standards in more cost effective and economically efficient ways. State law, as we have said, allows a regional board to consider a permit holder's compliance cost to *relax* pollutant concentrations, as measured by numeric standards, for pollutants in a wastewater discharge permit. (§§ 13241 & 13263.) Federal law, by contrast, as stated above in the text, "prohibits the discharge of pollutants into the navigable waters of the United States unless there is compliance with federal law (33 U.S.C. § 1311(a)), and publicly operated wastewater treatment plants such as those before us here must comply with the [federal] act's *clean water standards, regardless of cost* (see *id.*, §§ 1311(a), (b)(1)(B) & (C), 1342(a)(1) & (3))." (Italics added.)

8 As amended in 1978, section 13377 provides for the issuance of waste discharge permits that comply with federal clean water law "together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance." We do not here decide how this provision would affect the cost-consideration requirements of sections 13241 and 13263 when more stringent effluent standards or limitations in a permit are justified for some reason independent of compliance with federal law.

[***313] Thus, in this case, whether the Los Angeles Regional Board should have complied with sections 13263 and 13241 of California's Porter-Cologne Act by taking into account "economic considerations," such as the costs the permit holder will incur to comply with the numeric pollutant restrictions set out in the permits, depends on whether those restrictions meet or exceed the requirements of the federal Clean Water Act. We therefore remand this matter for the trial court to resolve that issue.

C. Other Contentions

The Cities argue that requiring a regional board at the wastewater discharge permit stage to consider the permit holder's cost of complying with the board's restrictions on pollutant content in the water is consistent with federal law. In support, the Cities point to certain

provisions of the federal Clean Water Act. They cite section 1251(a)(2) of title 33 United States Code, which sets, as a national goal "*wherever attainable,*" an interim goal for water quality that protects fish and wildlife, and section 1313(c)(2)(A) of the same title, which requires consideration, among other things, of waters' "*use and value* for navigation" when revising or adopting a "water quality standard." (Italics added.) These two federal statutes, however, pertain not to permits for wastewater discharge, at issue here, but to establishing water quality standards, not at issue here. Nothing in the federal Clean Water Act suggests that a state is free to disregard or to weaken the federal requirements for clean water when an NPDES permit holder alleges that compliance with those requirements will be too costly.

(10) At oral argument, counsel for amicus curiae National Resources Defense Council, which argued on behalf of California's State Board and regional water boards, asserted that the federal Clean Water Act incorporates state water policy into federal law, and that therefore a regional board's consideration of economic factors to justify greater pollutant concentration in discharged wastewater would conflict with the federal act even if the specified pollutant restrictions were not less stringent than those required under federal law. We are not persuaded. [HN13]The federal Clean Water Act reserves to the states significant aspects of water quality policy (33 U.S.C. § 1251(b)), and it specifically grants the states authority to "enforce any effluent limitation" that is not "*less stringent*" than the federal standard (33 U.S.C. § 1370, italics added). It does not prescribe or restrict the factors that a state may consider when exercising this reserved authority, and thus it does not prohibit [*628] a state--when imposing effluent limitations that are *more stringent* than required by federal law--from taking into account the economic effects of doing so.

Also at oral argument, counsel for the Cities asserted that if the three municipal wastewater treatment facilities ceased releasing their treated wastewater into the concrete channel that makes up the Los Angeles River, it would (other than during the rainy season) contain no water at all, and thus would not be a "navigable water" of the [**871] United States subject to the Clean Water Act. (See *Solid Waste Agency v. United States Army Corps of Engineers* (2001) 531 U.S. 159, 172 [148 L. Ed. 2d 576, 121 S. Ct. 675] ["The term 'navigable' has at least the import of showing us what Congress had in mind as its authority for enacting the CWA: its traditional jurisdiction over waters that were or had been navigable in fact or which could reasonably be so made."].) It is unclear when the Cities first raised this issue. The Court of Appeal did not discuss it in its opinion, and the Cities did not seek rehearing on this ground. (See Cal. Rules of Court, rule [***314] 28(c)(2).) Concluding that the issue is outside our grant of review, we do not address it.

Conclusion

Through the federal Clean Water Act, Congress has regulated the release of pollutants into our national waterways. The states are free to manage their own water quality programs so long as they do not compromise the federal clean water standards. When enacted in 1972, the goal of the Federal Water Pollution Control Act Amendments was to *eliminate* by the year 1985 the discharge of pollutants into the nation's navigable waters. In furtherance of that goal, the Los Angeles Regional Board indicated in its 1994 basin plan on water quality the intent, insofar as possible, to remove from the water in the Los Angeles River toxic substances in amounts harmful to humans, plants, and aquatic life. What is not clear from the record before us is whether, in limiting the chemical pollutant content of wastewater to be discharged by the Tillman, Los Angeles-Glendale, and Burbank wastewater treatment facilities, the Los Angeles Regional Board acted only to implement requirements of the federal Clean Water Act or instead imposed pollutant limitations that exceeded the federal requirements. This is an issue of fact to be resolved by the trial court.

Disposition

We affirm the judgment of the Court of Appeal reinstating the wastewater discharge permits to the extent that the specified numeric limitations on chemical pollutants are necessary to satisfy federal Clean Water Act requirements for treated wastewater. The Court of Appeal is directed to remand this [*629] matter to the trial court to decide whether any numeric limitations, as described in the permits, are "more stringent" than required under federal law and thus should have been subject to "economic considerations" by the Los Angeles Regional Board before inclusion in the permits.

George, C. J., Baxter, J., Werdegar, J., Chin, J., and Moreno, J., concurred.

CONCUR BY: BROWN

CONCUR

BROWN, J., Concurring.--I write separately to express my frustration with the apparent inability of the government officials involved here to answer a simple question: How do the federal clean water standards (which, as near as I can determine, are the state standards) prevent the state from considering economic factors? The majority concludes that because "the supremacy clause of the United States Constitution requires state law to yield to federal law, a regional board, when is-

suing a wastewater discharge permit, may not consider economic factors to justify imposing pollutant restrictions that are *less stringent* than the applicable federal standards require." (Maj. opn., *ante*, at p. 618.) That seems a pretty self-evident proposition, but not a useful one. The real question, in my view, is whether the Clean Water Act prevents or prohibits the regional water board from considering economic factors to justify pollutant restrictions that *meet* the clean water standards in more cost-effective and economically efficient ways. I can see no reason why a federal law--which purports to be an example of cooperative federalism--would decree such a result. I do not think the majority's reasoning is at fault here. Rather, the agencies involved seemed to have worked hard to make this simple question impenetrably obscure.

A brief review of the statutory framework at issue is necessary to understand my concerns. [***315]

[**872] **I. Federal Law**

"In 1972, Congress enacted the Federal Water Pollution Control Act (33 U.S.C. § 1251 et seq.), commonly known as the Clean Water Act (CWA) [Citation.] ... [¶] Generally, the CWA 'prohibits the discharge of any pollutant except in compliance with one of several statutory exceptions. [Citation.]' ... The most important of those exceptions is pollution discharge under a valid NPDES [National Pollution Discharge Elimination System] permit, which can be issued either by the Environmental Protection Agency (EPA), or by an EPA-approved state permit program such as California's. [Citations.] NPDES permits are valid for five years. [Citation.] [¶] Under the CWA's NPDES permit system, the states are required to develop *water quality standards*. [Citations.] A water quality standard 'establish[es] the desired condition of a waterway.? [Citation.] A water quality standard for any [*630] given waterway, or 'water body,' has two components: (1) the designated beneficial uses of the water body and (2) the *water quality criteria* sufficient to protect those uses. [Citations.] [¶] Water quality criteria can be either *narrative* or *numeric*. [Citation.]" (*Communities for a Better Environment v. State Water Resources Control Bd.* (2003) 109 Cal.App.4th 1089, 1092-1093 [1 Cal. Rptr. 3d 76].)

With respect to satisfying water quality standards, "a polluter must comply with *effluent limitations*. The CWA defines an effluent limitation as 'any restriction established by a State or the [EPA] Administrator on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters, the waters of the contiguous zone, or the ocean, including schedules of compliance.' [Citation.] 'Effluent limitations are a means of *achieving* water quality standards.' [Citation.] [¶] NPDES permits establish effluent limitations for the polluter. [Citations.] CWA's NPDES permit system provides for a two-step process for the establishing of effluent limitations. First, the polluter must comply with *technology-based effluent limitations*, which are limitations based on the best available or practical technology for the reduction of water pollution. [Citations.] [¶] Second, the polluter must also comply with more stringent *water quality-based effluent limitations* (WQBEL's) where applicable. In the CWA, Congress 'supplemented the "technology-based" effluent limitations with "water quality-based" limitations "so that numerous point sources, despite individual compliance with effluent limitations, may be further regulated to prevent water quality from falling below acceptable levels." ' [Citation.] [¶] The CWA makes WQBEL's applicable to a given polluter whenever WQBEL's are 'necessary to meet water quality standards, treatment standards, or schedules of compliance, established pursuant to any State law or regulations ... .' [Citations.] Generally, NPDES permits must conform to state water quality laws insofar as the state laws impose more stringent pollution controls than the CWA. [Citations.] Simply put, WQBEL's implement water quality standards." (*Communities for a Better Environment v. State Water Resources Control Bd., supra*, 109 Cal.App.4th at pp. 1093-1094, fns. omitted.)

This case involves water quality-based effluent limitations. As set forth above, "[u]nder the CWA, states have the primary role in promulgating water quality standards." (*Piney Run Preservation Ass'n v. Commrs. of Carroll Co.* (4th Cir. 2001) 268 F.3d 255, 265, fn. 9.) "Under the CWA, the water quality standards referred to in section 301 [see 33 U.S.C. § 1311] are primarily the states' handiwork." [***316] (*American Paper Institute, Inc. v. U.S. Envtl. Protection Agency* (D.C. Cir. 1993) 302 U.S. App. D.C. 80 [996 F.2d 346, 349] (*American Paper*).) In fact, upon the 1972 passage of the CWA, "[s]tate water quality standards in effect at the time ... were deemed to be the initial water quality benchmarks for CWA purposes ... . The states were to revisit and, if [*631] necessary, revise those initial standards at least once every three years." (*American Paper*, at p. 349.) Therefore, "once a water quality standard has been promulgated, section 301 of the CWA requires all NPDES permits for point sources to incorporate discharge limitations necessary to satisfy that standard." (*American Paper*, at p. 350.) Accordingly, it appears that in most instances, [**873] state water quality standards are identical to the federal requirements for NPDES permits.

II. State Law

In California, pursuant to the Porter-Cologne Water Quality Control Act (Wat. Code, § 13000 et seq.; Stats. 1969, ch. 482, § 18, p. 1051; hereafter Porter-Cologne Act), the regional water quality control boards establish water quality standards--and therefore federal requirements for NPDES permits--through the adoption of water quality control plans (basin plans). The basin plans establish water quality objectives using enumerated factors--including economic factors--set forth in Water Code section 13241.

In addition, as one court observed: "The Porter-Cologne Act ... established nine regional boards to prepare water quality plans (known as basin plans) and issue permits governing the discharge of waste. (Wat. Code, §§ 13100, 13140, 13200, 13201, 13240, 13241, 13243.) The Porter-Cologne Act identified these permits as 'waste discharge requirements,' and provided that the waste discharge requirements must mandate compliance with the applicable regional water quality control plan. (Wat. Code, §§ 13263, subd. (a), 13377, 13374.) [¶] Shortly after Congress enacted the Clean Water Act in 1972, the California Legislature added Chapter 5.5 to the Porter-Cologne Act, for the purpose of adopting the necessary federal requirements to ensure it would obtain EPA approval to issue NPDES permits. (Wat. Code, § 13370, subd. (c).) As part of these amendments, the Legislature provided that the state and regional water boards 'shall, as required or authorized by the [Clean Water Act], issue waste discharge requirements ... which apply and ensure compliance with all applicable provisions [of the Clean Water Act], together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance.' (Wat. Code, § 13377.) Water Code section 13374 provides that '[t]he term "waste discharge requirements" as referred to in this division is the equivalent of the term "permits" as used in the [Clean Water Act].' [¶] California subsequently obtained the required approval to issue NPDES permits. [Citation.] Thus, the waste discharge requirements issued by the regional water boards ordinarily also serve as NPDES permits under federal law. (Wat. Code, § 13374.)" (*Building Industry Assn. of San Diego County v. State Water Resources Control Bd.* (2004) 124 Cal.App.4th 866, 875 [22 Cal. Rptr. 3d 128].)

[*632] Applying this federal-state statutory scheme, it appears that throughout this entire process, the Cities of Burbank and Los Angeles (Cities) were unable to have economic factors considered because the Los Angeles Regional Water Quality Control Board (Board)--the body responsible to enforce the statutory framework--failed to comply with its statutory mandate.

[***317] For example, as the trial court found, the Board did not consider costs of compliance when it initially established its basin plan, and hence the water quality standards. The Board thus failed to abide by the statutory requirement set forth in Water Code section 13241 in establishing its basin plan. Moreover, the Cities claim that the initial narrative standards were so vague as to make a serious economic analysis impracticable. Because the Board does not allow the Cities to raise their economic factors in the permit approval stage, they are effectively precluded from doing so. As a result, the Board appears to be playing a game of "gotcha" by allowing the Cities to raise economic considerations when it is not practical, but precluding them when they have the ability to do so.

Moreover, the Board acknowledges that it has neglected other statutory provisions that might have provided an additional opportunity to air these concerns. As set forth above, pursuant to the CWA, "[t]he states were to revisit and, if necessary, revise those initial standards at least once every three years--a process commonly known as triennial review. [Citation.] Triennial reviews consist of public hearings in which current water quality standards are examined to assure that they 'protect the public health or welfare, enhance the quality of water and serve the purposes' of the Act. [Citation.] Additionally, the CWA directs [**874] states to consider a variety of competing policy concerns during these reviews, including a waterway's 'use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other purposes.' " (*American Paper, supra*, 996 F.2d at p. 349.)

According to the Cities, "[t]he last time that the narrative water quality objective for toxicity contained in the Basin Plan was reviewed and modified was 1994." The Board does not deny this claim. Accordingly, the Board has failed its duty to allow public discussion--including economic considerations--at the required intervals when making its determination of proper water quality standards.

What is unclear is why this process should be viewed as a contest. State and local agencies are presumably on the same side. The costs will be paid by taxpayers and the Board should have as much interest as any other agency in fiscally responsible environmental solutions.

[*633] Our decision today arguably allows the Board to continue to shirk its statutory duties. The majority holds that when read together, Water Code sections 13241, 13263, and 13377 do not allow the Board to consider economic factors when issuing NPDES permits to satisfy federal CWA requirements. (Maj. opn., *ante*, at pp. 625-627.) The majority then bifurcates the issue when it orders the Court of Appeal "to remand this mat-

ter to the trial court to decide whether any numeric limitations, as described in the permits, are 'more stringent' than required under federal law and thus should have been subject to 'economic considerations' by the Los Angeles Regional Board before inclusion in the permits." (*Id.* at pp. 628-629.)

The majority overlooks the feedback loop established by the CWA, under which federal standards are linked to state-established water quality standards, including narrative water quality criteria. (See 33 U.S.C. § 1311 (b)(1)(C); 40 C.F.R. § 122.44(d)(1) (2004).) Under the CWA, NPDES permit requirements include the state narrative criteria, which are incorporated into the Board's basin plan under the description "no toxins in toxic amounts." As far as I can determine, NPDES permits [***318] designed to achieve this narrative criteria (as well as designated beneficial uses) will usually implement the state's basin plan, while satisfying federal requirements as well.

If federal water quality standards are typically identical to state standards, it will be a rare instance that a state exceeds its own requirements and economic factors are taken into consideration. [1] In light of the Board's initial failure to consider costs of compliance and its repeated failure to conduct required triennial reviews, the result here is an unseemly bureaucratic bait-and-switch that we should not endorse. The likely outcome of the majority's decision is that the Cities will be economically burdened to meet standards imposed on them in a highly questionable manner. [2] In these times of tight fiscal budgets, it is difficult to imagine imposing additional financial burdens on municipalities without at least allowing them to present alternative views.

1 (But see *In the Matter of the Petition of City and County of San Francisco, San Francisco Baykeeper et al.* (Order No. WQ 95-4, Sept. 21, 1995) 1995 WL 576920.)

2 Indeed, given the fact that "water quality standards" in this case are composed of broadly worded components (i.e., a narrative criteria and "designated beneficial uses of the water body"), the Board possessed a high degree of discretion in setting NPDES permit requirements. Based on the Board's past performance, a proper exercise of this discretion is uncertain.

Based on the facts of this case, our opinion today appears to largely retain the status quo for the Board. If the Board can actually demonstrate that only the precise limitations at issue here, implemented in only one way, will achieve the desired water standards, perhaps its obduracy is justified. That case has yet to be made.

[*634] Accordingly, I cannot conclude that the majority's decision is wrong. The analysis [**875] may provide a reasonable accommodation of conflicting provisions. However, since the Board's actions "make me wanna holler and throw up both my hands," [3] I write separately to set forth my concerns and concur in the judgment--*dubitante*. [4]

3 Marvin Gaye (1971) "Inner City Blues."

4 I am indebted to Judge Berzon for this useful term. (See *Credit Suisse First Boston Corp. v. Grunwald* (9th Cir. 2005) 400 F.3d 1119 [2005 WL 466202] (conc. opn. of Berzon, J.).)

The petitions of all appellants and respondent for a rehearing were denied June 29, 2005. Brown, J., did not participate therein.

TAB "9"

Positive
As of: Jun 23, 2010

COUNTY OF FRESNO, Plaintiff and Appellant, v. THE STATE OF CALIFORNIA et al., Defendants and Respondents.

No. S015637.

Supreme Court of California

53 Cal. 3d 482; 808 P.2d 235; 280 Cal. Rptr. 92; 1991 Cal. LEXIS 1363; 91 Cal. Daily Op. Service 2870; 91 Daily Journal DAR 4617

April 22, 1991.

PRIOR HISTORY: Superior Court of Fresno County, No. 379518-4, Gary S. Austin, Judge.

CASE SUMMARY:

PROCEDURAL POSTURE: Appellant county sought review of a judgment from the Court of Appeal (California), which affirmed the trial court's dismissal of appellant's petition for writ of mandate that sought a declaration that the state reimbursement statute, Cal. Gov't Code § 17556(d), was facially unconstitutional under Cal. Const. art. XIII B, § 6.

OVERVIEW: Appellant county filed a petition for writ of mandate and a complaint for declaratory relief against respondents, state, commission, and others, that sought to vacate respondent commission's decision, and sought a declaration that Cal. Gov't Code § 17556(d) was unconstitutional under Cal. Const. art. XIII B, § 6. The trial court denied appellant's petition for writ of mandate and complaint for declaratory relief. The appellate court affirmed. The court granted review for determination on whether § 17556(d) was facially constitutional under Cal. Const. art. XIII B, § 6. The court rejected appellant's argument that the state's enactment of § 17556(d) created a new exception to the reimbursement requirement of Cal. Const. art. XIII B, § 6. The court held that the § 17556(d) was facially constitutional under Cal. Const. art. XIII B, § 6. The court affirmed the appellate court's judgment.

OUTCOME: The court affirmed the appellate court's judgment, and affirmed the dismissal of appellant county's petition for writ of mandate because the state's reimbursement statute was facially constitutional under the California constitution.

CORE TERMS: local governments, mandated, user fees, reimbursement, initiative, level of service, appropriations, facially, taxation, voter, state mandates, new program, levy, constitutional provision, tax revenues, expenditure, recoverable, excluding, statewide, ballot, subvention of funds, self-financing, implementing, subvention, reimburse, spending, duck, local agency, hazardous materials, sufficient to pay

LexisNexis(R) Headnotes

Constitutional Law > Congressional Duties & Powers > Spending & Taxation
[HN1]See Cal. Const. art. XIII B, § 6.

Constitutional Law > Congressional Duties & Powers > Spending & Taxation
Governments > Local Governments > Administrative Boards
Governments > Local Governments > Claims By & Against
[HN2] Cal. Gov't Code §§ 17500-17630 is enacted to implement Cal. Const. art. XIII B, § 6. Cal. Gov't Code § 17500. A quasi-judicial body is created called the

Commission on State Mandates to hear and decide upon any claim by a local government that the local government is entitled to be reimbursed by the state for costs as required by Cal. Const. art. XIII B, § 6. Cal. Gov't. Code § 17551(a).

Constitutional Law > Congressional Duties & Powers > Spending & Taxation
[HN3]Costs is defined as costs mandated by the state for any increased costs that the local government is required to incur as a result of any statute, or any executive order implementing any statute, which mandates a new program or higher level of service of any existing program within the meaning of Cal. Const. art. XIII B, § 6. Cal. Gov't. Code § 17514.

Constitutional Law > Congressional Duties & Powers > Spending & Taxation
Governments > Local Governments > Duties & Powers
[HN4] Cal. Gov't Code § 17556(d) declares that the commission shall not find costs mandated by the state if, after a hearing, the commission finds that the local government has the authority to levy service charges, fees, or assessments sufficient to pay for the mandated program or increased level of service.

Constitutional Law > Congressional Duties & Powers > Spending & Taxation
[HN5]Cal. Const. arts. XIIIA, XIIIB work in tandem, together restricting the California government's power both to levy and to spend taxes for public purposes.

Constitutional Law > Congressional Duties & Powers > Spending & Taxation
Tax Law > State & Local Taxes > General Overview
[HN6]Cal. Const. art. XIIIB intention is to apply to taxation specifically that provides permanent protection for taxpayers from excessive taxation, and a reasonable way to provide discipline in tax spending at state and local levels.

Constitutional Law > Congressional Duties & Powers > Spending & Taxation
[HN7]The relevant appropriations subject to limitation is defined as any authorization to expend during a fiscal year the proceeds of taxes. Cal. Const. art. XIIIB, § 8(b). Proceeds of taxes is defined as including all tax revenues and the proceeds to government from regulatory licenses, user charges, and user fees to the extent that such proceeds exceed the costs reasonably borne by government in providing the regulation, product, or service. Cal. Const. art. XIIIB, § 8(c). Excess proceeds from licenses, charges, and fees are taxes.

Constitutional Law > Congressional Duties & Powers > Spending & Taxation
Governments > Local Governments > Finance
[HN8]Cal. Const. art. XIIIB, § 6 is included in recognition that Cal. Const. art. XIIIA severely restricts the taxing powers of local governments. The provision was intended to preclude the state from shifting financial responsibility for carrying out governmental functions onto local entities that are ill equipped to handle the task.

Constitutional Law > Congressional Duties & Powers > Spending & Taxation
Governments > Local Governments > Duties & Powers
[HN9] Cal. Gov't Code § 17556(d) provides that the commission shall not find costs mandated by the state if, after a hearing, the commission finds that the local government has the authority to levy service charges, fees, or assessments sufficient to pay for the mandated program or increased level of service.

SUMMARY:

CALIFORNIA OFFICIAL REPORTS SUMMARY

A county filed a test claim with the Commission on State Mandates seeking, under Cal. Const., art. XIII B, § 6 (state must provide subvention of funds to reimburse local governments for costs of state-mandated programs or increased levels of service), reimbursement from the state for costs incurred in implementing the Hazardous Materials Release Response Plans and Inventory Act (Health & Saf. Code, § 25500 et seq.). The commission found the county had the authority to charge fees to pay for the program, and the program was thus not a reimbursable state-mandated program under Gov. Code, § 17556, subd. (d), which provides that costs are not state-mandated if the agency has the authority to levy a charge or fee sufficient to pay for the program. The county filed a petition for writ of mandate and a complaint for declaratory relief against the state. The trial court denied relief. (Superior Court of Fresno County, No. 379518-4, Gary S. Austin, Judge.) The Court of Appeal, Fifth Dist., No. F011925, affirmed.

The Supreme Court affirmed the decision of the Court of Appeal. The court held, as to the single issue on review, that Gov. Code, § 17556, subd. (d), was facially constitutional under Cal. Const., art. XIII B, § 6. It held art. XIII B was not intended to reach beyond taxation, and § 6 was included in art. XIII B in recognition that

Cal. Const., art. XIII A, severely restricted the taxing powers of local governments. It held that art. XIII B, § 6 was designed to protect the tax revenues of local governments from state mandates that would require an expenditure of such revenues and, when read in textual and historical context, requires subvention only when the costs in question can be recovered solely from tax revenues. Accordingly, the court held that Gov. Code, § 17556, subd. (d), effectively construed the term "cost" in the constitutional provision as excluding expenses that are recoverable from sources other than taxes, and that such a construction is altogether sound. (Opinion by Mosk, J., with Lucas, C. J., Broussard, Panelli, Kennard, JJ., and Best (Hollis G.), J., * concurring. Separate concurring opinion by Arabian, J.)

* Presiding Justice, Court of Appeal, Fifth Appellate District, assigned by the Chairperson of the Judicial Council.

HEADNOTES

CALIFORNIA OFFICIAL REPORTS HEADNOTES
Classified to California Digest of Official Reports, 3d Series

(1) State of California § 11--Reimbursement to Local Governments for State-mandated Costs--Costs for Which Fees May Be Levied--Validity of Exclusion. --In a proceeding by a county seeking reversal of a decision by the Commission on State Mandates that the state was not required by Cal. Const., art. XIII B, § 6, to reimburse the county for costs incurred in implementing the Hazardous Materials Release Response Plans and Inventory Act (Health & Saf. Code, § 25500 et seq.), the trial court properly found that Gov. Code, § 17556, subd. (d) (costs are not state-mandated if agency has authority to levy charge or fee sufficient to pay for program), was facially constitutional. Cal. Const., art. XIII B, was intended to apply to taxation and was not intended to reach beyond taxation, as is apparent from its language and confirmed by its history. It was designed to protect the tax revenues of local governments from state mandates that would require expenditure of such revenues; read in its textual and historical contexts, it requires subvention only when the costs in question can be recovered solely from tax revenues. Gov. Code, § 17556, subd. (d), effectively construes the term "costs" in the constitutional provision as excluding expenses that are recoverable from sources other than taxes, and that construction is altogether sound. Accordingly, Gov. Code, § 17556, subd. (d), is facially constitutional under Cal. Const., art. XIII B, § 6.

[See 9 **Witkin,** Summary of Cal. Law (9th ed. 1988) Taxation, § 124.]

COUNSEL: Max E. Robinson, County Counsel, and Pamela A. Stone, Deputy County Counsel, for Plaintiff and Appellant.

B. C. Barnum, County Counsel (Kern), and Patricia J. Randolph, Deputy County Counsel, as Amici Curiae on behalf of Plaintiff and Appellant.

John K. Van de Kamp and Daniel E. Lungren, Attorneys General, N. Eugene Hill, Assistant Attorney General, and Richard M. Frank, Deputy Attorney General, for Defendants and Respondents.

JUDGES: Mosk, J. Lucas, C.J., Broussard, J., Panelli, J., Kennard, J., Best (Hollis G.), J., * concur. Arabian, J., concurring.

* Presiding Justice, Court of Appeal, Fifth Appellate District, sitting under assignment by the Chairperson of the Judicial Council.

OPINION BY: MOSK

OPINION

[*484] [**236] [***93] MOSK, J.

We granted review in this proceeding to decide whether section 17556, subdivision (d), of the Government Code (section 17556(d)) is facially valid under article XIII B, section 6, of the California Constitution (article XIII B, section 6).

[HN1]Article XIII B, section 6, provides: "Whenever the Legislature or any state agency mandates a new program or higher level of service on any local government, the state shall provide a subvention of funds to reimburse such local government for the costs of such program or increased level of service, except that the Legislature may, but need not, provide such subvention of funds for the following mandates: [P] (a) Legislative mandates requested by the local agency affected; [P] (b) Legislation defining a new crime or changing an existing definition of a crime; or [P] (c) Legislative mandates enacted prior to January 1, 1975, or executive orders or regulations initially implementing legislation enacted prior to January 1, 1975."

The Legislature enacted [HN2] Government Code sections 17500 through 17630 to implement article XIII B, section 6. (Gov. Code, § 17500.) It created a "quasi-judicial body" (*ibid* .) called the Commission on State Mandates (commission) (*id* ., § 17525) to "hear and decide upon [any] claim" by a local government that the

local government "is entitled to be reimbursed by the state for costs" as required by article XIII B, section 6. (Gov. Code, § 17551, subd. (a).) It defined [HN3]"costs" as "costs mandated by the state"--"any increased costs" that the local government "is required to incur . . . as a result of any statute . . . , or any executive order implementing any statute . . . , which mandates a new program or higher level of service of any existing program" within the meaning of article XIII B, section 6. (Gov. Code, § 17514.) Finally, [HN4]in section 17556(d) it declared that "The commission shall not find costs mandated by the state . . . if, after a hearing, the commission finds that" the local government "has the authority to levy service charges, fees, or assessments sufficient to pay for the mandated program or increased level of service."

For the reasons discussed below, we conclude that section 17556(d) is facially constitutional under article XIII B, section 6.

[*485] I. FACTS AND PROCEDURAL HISTORY

The present proceeding arose after the Legislature enacted the Hazardous Materials Release Response Plans and Inventory Act (Act). (Health & Saf. Code, § 25500 et seq.) The Act establishes minimum statewide standards for business and area plans relating to the handling and release or threatened release of hazardous materials. (*Id* ., § 25500.) It requires local governments to implement its provisions. (*Id* ., § 25502.) To cover the costs they may incur, it authorizes them to collect fees from those who handle hazardous materials. (*Id*., § 25513.)

The County of Fresno (County) implemented the Act but chose not to impose the authorized fees. Instead, it filed a so-called "test" or initial claim with the commission (Gov. Code, § 17521) seeking reimbursement from the State of California (State) under article XIII B, section 6. After a hearing, the commission rejected the claim. In its statement of decision, the commission made the following findings, among others: the Act constituted a "new program"; the County did indeed incur increased [**237] [***94] costs; but because it had authority under the Act to levy fees sufficient to cover such costs, section 17556(d) prohibited a finding of reimbursable costs.

The County then filed a petition for writ of mandate and complaint for declaratory relief against the State, the commission, and others, seeking vacation of the commission's decision and a declaration that section 17556(d) is unconstitutional under article XIII B, section 6. While the matter was pending, the commission amended its statement of decision to include another basis for denial of the test claim: the Act did not constitute a "program" under the rationale of *County of Los Angeles* v. *State of California* (1987) 43 Cal.3d 46 [233 Cal.Rptr. 38, 729 P.2d 202] (*County of Los Angeles*), because it did not impose unique requirements on local governments.

After a hearing, the trial court denied the petition and effectively dismissed the complaint. It determined, inter alia, that mandate under Code of Civil Procedure section 1094.5 was the County's sole remedy, and that the commission was the sole properly named respondent. It also determined that section 17556(d) is constitutional under article XIII B, section 6. It did not address the question whether the Act constituted a "program" under *County of Los Angeles* . Judgment was entered accordingly.

The Court of Appeal affirmed. It held the Act did indeed constitute a "program" under *County of Los Angeles , supra* , 43 Cal.3d 46. It also held section 17556(d) is constitutional under article XIII B, section 6.

[*486] **(1)** We granted review to decide a single issue, i.e., whether section 17556(d) is facially constitutional under article XIII B, section 6.

II. DISCUSSION

We begin our analysis with the California Constitution. At the June 6, 1978, Primary Election, article XIII A was added to the Constitution through the adoption of Proposition 13, an initiative measure aimed at controlling ad valorem property taxes and the imposition of new "special taxes." (*Amador Valley Joint Union High Sch. Dist.* v. *State Bd. of Equalization* (1978) 22 Cal.3d 208, 231-232 [149 Cal.Rptr. 239, 583 P.2d 1281].) The constitutional provision imposes a limit on the power of state and local governments to adopt and levy taxes. (*City of Sacramento* v. *State of California* (1990) 50 Cal.3d 51, 59, fn. 1 [266 Cal.Rptr. 139, 785 P.2d 522] (*City of Sacramento*).)

At the November 6, 1979, Special Statewide Election, article XIII B was added to the Constitution through the adoption of Proposition 4, another initiative measure. That measure places limitations on the ability of both state and local governments to appropriate funds for expenditures.

[HN5]"Articles XIII A and XIII B work in tandem, together restricting California governments' power both to levy and to spend [taxes] for public purposes." (*City of Sacramento , supra* , 50 Cal.3d at p. 59, fn. 1.)

[HN6]Article XIII B of the Constitution was intended to apply to taxation specifically, to provide "permanent protection for taxpayers from excessive taxation" and "a reasonable way to provide discipline in tax spending at state and local levels." (See *County of Placer* v. *Corin* (1980) 113 Cal.App.3d 443, 446 [170 Cal.Rptr. 232], quoting and following Ballot Pamp.,

Proposed Stats. and Amends. to Cal. Const. with arguments to voters, Special Statewide Elec. (Nov. 6, 1979), argument in favor of Prop. 4, p. 18.) To this end, it establishes an "appropriations limit" for both state and local governments (Cal. Const., art. XIII B, § 8, subd. (h)) and allows no "appropriations subject to limitation" in excess thereof (*id .*, § 2). (See *County of Placer* v. *Corin* , *supra* , 113 Cal.App.3d at p. 446.) It defines [HN7]the relevant "appropriations subject to limitation" as "any authorization to expend during a fiscal year the proceeds of taxes . . . ." (Cal. Const., art. XIII B, § 8, subd. (b).) It defines "proceeds of taxes" as including "all tax revenues and the proceeds to . . . government from," inter alia, "regulatory licenses, user charges, and user fees *to the extent that such proceeds exceed the costs reasonably borne by [government] in providing* [**238] [***95] *the regulation, product, or service* . . . ." (Cal. Const., art. XIII B, § 8, subd. (c), italics added.) Such "excess" proceeds from "licenses," "charges," and "fees" "are but [*487] *taxes* " for purposes here. (*County of Placer* v. *Corin* , *supra* , 113 Cal.App.3d at p. 451, italics in original.)

Article XIII B of the Constitution, however, was not intended to reach beyond taxation. That fact is apparent from the language of the measure. It is confirmed by its history. In his analysis, the Legislative Analyst declared that Proposition 4 "would not restrict the growth in appropriations financed from other [i.e., nontax] sources of revenue, including federal funds, bond funds, traffic fines, user fees based on reasonable costs, and income from gifts." (Ballot Pamp., Proposed Stats. and Amends. to Cal. Const. with arguments to voters, Special Statewide Elec. (Nov. 6, 1979), analysis by Legislative Analyst, p. 16.)

[HN8]Section 6 was included in article XIII B in recognition that article XIII A of the Constitution severely restricted the taxing powers of local governments. (See *County of Los Angeles* , *supra* , 43 Cal.3d at p. 61.) The provision was intended to preclude the state from shifting financial responsibility for carrying out governmental functions onto local entities that were ill equipped to handle the task. (*Ibid .*; see *Lucia Mar Unified School Dist.* v. *Honig* (1988) 44 Cal.3d 830, 836, fn. 6 [244 Cal.Rptr. 677, 750 P.2d 318].) Specifically, it was designed to protect the tax revenues of local governments from state mandates that would require expenditure of such revenues. Thus, although its language broadly declares that the "state shall provide a subvention of funds to reimburse . . . local government for the costs [of a state-mandated new] program or higher level of service," read in its textual and historical context section 6 of article XIII B requires subvention only when the costs in question can be recovered *solely from tax revenues* .

In view of the foregoing analysis, the question of the facial constitutionality of section 17556(d) under article XIII B, section 6, can be readily resolved. As noted, [HN9]the statute provides that "The commission shall not find costs mandated by the state . . . if, after a hearing, the commission finds that" the local government "has the authority to levy service charges, fees, or assessments sufficient to pay for the mandated program or increased level of service." Considered within its context, the section effectively construes the term "costs" in the constitutional provision as excluding expenses that are recoverable from sources other than taxes. Such a construction is altogether sound. As the discussion makes clear, the Constitution requires reimbursement only for those expenses that are recoverable solely from taxes. It follows that section 17556(d) is facially constitutional under article XIII B, section 6.

The County argues to the contrary. It maintains that section 17556(d) in essence creates a new exception to the reimbursement requirement of article XIII B, section 6, for self-financing programs and that the Legislature cannot create exceptions to the reimbursement requirement beyond those enumerated in the Constitution.

We do not agree that in enacting section 17556(d) the Legislature created a new exception to the reimbursement requirement of article [*488] XIII B, section 6. As explained, the Legislature effectively and properly construed the term "costs" as excluding expenses that are recoverable from sources other than taxes. In a word, such expenses are outside of the scope of the requirement. Therefore, they need not be explicitly excepted from its reach.

The County nevertheless argues that no matter how characterized, section 17556(d) is indeed inconsistent with article XIII B, section 6. Its contention is in substance as follows: the source of section 17556(d) is former Revenue and Taxation Code section 2253.2; at the time of Proposition 4, subdivision (b)(4) of that former section stated that the State Board of Control shall not allow a claim for reimbursement of costs mandated by the state if the legislation contains a self-financing authority; the [**239] [***96] drafters of Proposition 4 incorporated some of the provisions of former Revenue and Taxation Code section 2253.2 into article XIII B, section 6, but did not incorporate former subdivision (b)(4); their failure to do so reveals an intent to treat as immaterial the presence or absence of a "self-financing" provision; and such an intent is confirmed by the "legislative history" set out at page 55 in Spirit of 13, Inc., Summary of Proposed Implementing Legislation and Drafters' Intent: "the state may not arbitrarily declare that it is not going to comply with Section 6 . . . if the state provides new compensating revenues."

In our view, the County's argument is unpersuasive. Even if we assume arguendo that the intent of those who drafted Proposition 4 is as claimed, what is crucial here is the intent of those who voted for the measure. (See *County of Los Angeles , supra* , 43 Cal.3d 46, 56.) There is no substantial evidence that the voters sought what the County assumes the drafters desired. Moreover, the "legislative history" cited above cannot be considered relevant; it was written and circulated after the passage of Proposition 4. As such, it could not have affected the voters in any way.

To avoid this result, the County advances one final argument: "Based on the authority of [section 17556(d)], the Commission on State Mandates refuses to hear mandates on the merits once it finds that the authority to charge fees is given by the Legislature. This position is taken whether or not fees can actually or legally be charged to recover the entire costs of the program."

[*489] The County appears to be making one or both of the following arguments: (1) the commission applies section 17556(d) in an unconstitutional manner; or (2) the Act's self-financing authority is somehow lacking. Such contentions, however, miss the designated mark. They raise questions bearing on the constitutionality of section 17556(d) as applied and the legal efficacy of the authority conferred by the Act. The sole issue on review, however, is the facial constitutionality of section 17556(d).

III. CONCLUSION

For the reasons set forth above, we conclude that section 17556(d) is facially constitutional under article XIII B, section 6.

The judgment of the Court of Appeal is affirmed.

Lucas, C. J., Broussard, J., Panelli, J., Kennard, J., and Best (Hollis G.), J., * concurred.

* Presiding Justice, Court of Appeal, Fifth Appellate District, assigned by the Chairperson of the Judicial Council.

CONCUR BY: ARABIAN

CONCUR

ARABIAN, J., Concurring.

I concur in the determination that Government Code section 17556, subdivision (d) [1] (section 17556(d)), does not offend article XIII B, section 6, of the California Constitution (article XIII B, section 6). In my estimation, however, the constitutional measure of the issue before us warrants fuller examination than the majority allow. A literalistic analysis begs the question of whether the Legislature had the authority to act statutorily upon a subject matter the electorate has spoken to constitutionally through the initiative process.

1 Unless otherwise indicated, all further statutory references are to the Government Code.

Article XIII B, section 6, unequivocally commands that "the state shall provide a subvention of funds to reimburse . . . local government for the costs of [a new] program or increased level of service" except as specified therein. Article XIII B does not define this reference to "costs." (See Cal. Const., art. XIII B, § 8.) Rather, the Legislature assumed the task of explicating the related concept of "costs mandated by the state" when it created the Commission on State Mandates and enacted procedures intended to implement article XIII B, section 6, more effectively. (See § 17500 et seq.) As part of this statutory scheme, it exempted the state from its constitutionally imposed subvention obligation under certain enumerated circumstances. Some of these exemptions the electorate expressly contemplated in approving article XIII B, section 6 (§ 17556, subds. (a), (c), & (g); see [**240] [***97] § 17514), while others are strictly of legislative formulation and derive from [*490] former Revenue and Taxation Code section 2253.2. (§ 17556, subds. (b), (d), (e), & (f).)

The majority find section 17556 valid notwithstanding the mandatory language of article XIII B, section 6, based on the circular and conclusory rationale that "the Legislature effectively and properly construed the term 'costs' as excluding expenses that are recoverable from sources other than taxes. In a word, such expenses are outside of the scope of the [subvention] requirement. Therefore, they need not be explicitly excepted from its reach." (Maj. opn., *ante* , at p. 488.) In my view, excluding or otherwise removing something from the purview of a law is tantamount to creating an exception thereto. When an exclusionary implication is clear from the import or effect of the statutory language, use of the word "except" should not be necessary to construe the result for what it clearly is. In this circumstance, "I would invoke the folk wisdom that if an object looks like a duck, walks like a duck and quacks like a duck, it is likely to be a duck." (*In re Deborah C.* (1981) 30 Cal.3d 125, 141 [177 Cal.Rptr. 852, 635 P.2d 446] (conc. opn. by Mosk, J.).)

Of at least equal importance, section 17500 et seq. constitutes a legislative implementation of article XIII B, section 6. As such, the overall statutory scheme must comport with the express constitutional language it was designed to effectuate as well as the implicit electoral intent. Eschewing semantics, I would squarely and forth-

rightly address the fundamental and substantial question of whether the Legislature could lawfully enlarge upon the scope of article XIII B, section 6, to include exceptions not originally designated in the initiative.

I do not hereby seek to undermine the majority holding but rather to set it on a firmer constitutional footing. "[S]tatutes must be given a reasonable interpretation, one which will carry out the intent of the legislators and render them valid and operative rather than defeat them. In so doing, sections of the Constitution, as well as the codes, will be harmonized where reasonably possible, in order that all may stand." (*Rose v. State of California* (1942) 19 Cal.2d 713, 723 [123 P.2d 505]; see also *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 58 [233 Cal.Rptr. 38, 729 P.2d 202].) To this end, it is a fundamental premise of our form of government that "the Constitution of this State is not to be considered as a grant of power, but rather as a restriction upon the powers of the Legislature; and . . . it is competent for the Legislature to exercise all powers not forbidden . . . ." (*People v. Coleman* (1854) 4 Cal. 46, 49.) "Two important consequences flow from this fact. First, the entire law-making authority of the state, except the people's right of initiative and referendum, is vested in the [*491] Legislature, and that body may exercise any and all legislative powers which are not expressly or by necessary implication denied to it by the Constitution. [Citations.] *In other words, 'we do not look to the Constitution to determine whether the legislature is authorized to do an act, but only to see if it is prohibited*.' [Citation.] [P] Secondly, all intendments favor the exercise of the Legislature's plenary authority: 'If there is any doubt as to the Legislature's power to act in any given case, the doubt should be resolved in favor of the Legislature's action. Such restrictions and limitations [imposed by the Constitution] are to be construed strictly, and are not to be extended to include matters not covered by the language used.' [Citations.]" (*Methodist Hosp. of Sacramento v. Saylor* (1971) 5 Cal.3d 685, 691 [97 Cal.Rptr. 1, 488 P.2d 161], italics added.) "Specifically, the express enumeration of legislative powers is not an exclusion of others not named unless accompanied by negative terms. [Citations.]" (*Dean v. Kuchel* (1951) 37 Cal.2d 97, 100 [230 P.2d 811].)

As the majority opinion impliedly recognizes, neither the language nor the intent of article XIII B conflicts with the exercise of legislative prerogative we review today. Of paramount significance, neither section 6 nor any other provision of article XIII B prohibits statutory delineation of additional [**241] [***98] circumstances obviating reimbursement for state mandated programs. (See *Dean v. Kuchel*, *supra*, 37 Cal.2d at p. 101; *Roth Drugs, Inc. v. Johnson* (1936) 13 Cal.App.2d 720, 729 [57 P.2d 1022]; see also *Kehrlein v. City of Oakland* (1981) 116 Cal.App.3d 332, 338 [172 Cal.Rptr. 111].)

Furthermore, the initiative was "[b]illed as a flexible way to provide discipline in government spending" by creating appropriations limits to restrict the amount of such expenditures. (*County of Placer v. Corin* (1980) 113 Cal.App.3d 443, 447 [170 Cal.Rptr. 232]; see Cal. Const., art. XIII B, § 1.) By their nature, user fees do not affect the equation of local government spending: While they facilitate implementation of newly mandated state programs or increased levels of service, they are excluded from the "appropriations subject to limitations" calculation and its attendant budgetary constraints. (See Cal. Const., art. XIII B, § 8; see also *City Council v. South* (1983) 146 Cal.App.3d 320, 334 [194 Cal.Rptr. 110]; *County of Placer v. Corin*, *supra*, 113 Cal.App.3d at pp. 448-449; Cal. Const., art. XIII B, § 3, subd. (b); cf. *Russ Bldg. Partnership v. City and County of San Francisco* (1987) 199 Cal.App.3d 1496, 1505 [246 Cal.Rptr. 21] ["fees not exceeding the reasonable cost of providing the service or regulatory activity for which the fee is charged and which are not levied for general revenue purposes, have been considered outside the realm of "special taxes" [limited by California Constitution, article XIII A]q "]; *Terminal Plaza Corp. v. City* [*492] *and County of San Francisco* (1986) 177 Cal.App.3d 892, 906 [223 Cal.Rptr. 379] [same].)

This conclusion fully accommodates the intent of the voters in adopting article XIII B, as reflected in the ballot materials accompanying the proposition. (See *Amador Valley Joint Union High Sch. Dist. v. State Bd. of Equalization* (1978) 22 Cal.3d 208, 245-246 [149 Cal.Rptr. 239, 583 P.2d 1281].) In general, these materials convey that "[t]he goals of article XIII B, of which section 6 is a part, were to protect residents from excessive taxation and government spending." (*County of Los Angeles v. State of California*, *supra*, 43 Cal.3d at p. 61; *Huntington Park Redevelopment Agency v. Martin* (1985) 38 Cal.3d 100, 109-110 [211 Cal.Rptr. 133, 695 P.2d 220].) To the extent user fees are not borne by the general public or applied to the general revenues, they do not bear upon this purpose. Moreover, by imputation, voter approval contemplated the continued imposition of reasonable user fees outside the scope of article XIII B. (Ballot Pamp., Proposed Amends. to Cal. Const. with arguments to voters, Limitation of Government Appropriations, Special Statewide Elec. (Nov. 6, 1979), arguments in favor of and against Prop. 4, p. 18 [initiative "WILL curb excessive user fees imposed by local government" but "will NOT eliminate user fees . . ."]; see *County of Placer v. Corin*, *supra*, 113 Cal.App.3d at p. 452.)

"The concern which prompted the inclusion of section 6 in article XIII B was the perceived attempt by the

state to enact legislation or adopt administrative orders creating programs to be administered by local agencies, thereby transferring to those agencies the fiscal responsibility for providing services which the state believed should be extended to the public." (*County of Los Angeles* v. *State of California* , *supra* , 43 Cal.3d at p. 56; see *City of Sacramento* v. *State of California* (1990) 50 Cal.3d 51, 66 [266 Cal.Rptr. 139, 785 P.2d 522].) "Section 6 had the additional purpose of precluding a shift of financial responsibility for carrying out governmental functions from the state to local agencies which had had their taxing powers restricted by the enactment of article XIII A in the preceding year and were ill equipped to take responsibility for any new programs." (*County of Los Angeles* v. *State of California* , *supra* , 43 Cal.3d at p. 61.) An exemption from reimbursement for state mandated programs for which local governments are authorized to charge offsetting user fees does not frustrate or compromise these goals or otherwise disturb the balance of local government financing [**242] [***99] and expenditure. [2] (See *County of Placer* v. *Corin* , *supra* , 113 Cal.App.3d at p. 452, [*493] fn. 7.) Article XIII B, section 8, subdivision (c), specifically includes regulatory licenses, user charges, and user fees in the appropriations limitation equation only "to the extent that those proceeds exceed the costs reasonably borne by [the governmental] entity in providing the regulation, product, or service . . . ."

> 2 This conclusion also accords with the traditional and historical role of user fees in promoting the multifarious functions of local government by imposing on those receiving a service the cost of providing it. (Cf. *County of Placer* v. *Corin* , *supra* , 113 Cal.App.3d at p. 454 ["Special assessments, being levied only for improvements that benefit particular parcels of land, and not to raise general revenues, are simply not the type of exaction that can be used as a mechanism for circumventing these tax relief provisions. [Citation.]"].)

The self-executing nature of article XIII B does not alter this analysis. "It has been uniformly held that the legislature has the power to enact statutes providing for reasonable regulation and control of rights granted under constitutional provisions. [Citations.]" (*Chesney* v. *Byram* (1940) 15 Cal.2d 460, 465 [101 P.2d 1106].) ""Legislation may be desirable, by way of providing convenient remedies for the protection of the right secured, or of regulating the claim of the right so that its exact limits may be known and understood; but all such legislation must be subordinate to the constitutional provision, and in furtherance of its purpose, and must not in any particular attempt to narrow or embarrass it." [Citations.]'" (*Id* ., at pp. 463-464; see also *County of Contra Costa* v. *State of California* (1986) 177 Cal.App.3d 62, 75 [222 Cal.Rptr. 750].) Section 17556(d) is not "merely [a] transparent attempt[] to do indirectly that which cannot lawfully be done directly." (*Carmel Valley Fire Protection Dist.* v. *State of California* (1987) 190 Cal.App.3d 521, 541 [234 Cal.Rptr. 795].) On the contrary, it creates no conflict with the constitutional directive it subserves. Hence, rather than pursue an interpretive expedient, this court should expressly declare that it operates as a valid legislative implementation thereof.

"[Initiative] provisions of the Constitution and of charters and statutes should, as a general rule, be liberally construed in favor of the reserved power. [Citations.] As opposed to that principle, however, 'in examining and ascertaining the intention of the people with respect to the scope and nature of those . . . powers, it is proper and important to consider what the consequences of applying it to a particular act of legislation would be, and if upon such consideration it be found that by so applying it the inevitable effect would be greatly to impair or wholly destroy the efficacy of some other governmental power, the practical application of which is essential and, perhaps, . . . indispensable, to the convenience, comfort, and well-being of the inhabitants of certain legally established districts or subdivisions of the state or of the whole state, then in such case the courts may and should assume that the people intended no such result to flow from the application of those powers and that they do not so apply.' [Citation.]" (*Hunt* v. *Mayor & Council of Riverside* (1948) 31 Cal.2d 619, 628-629 [191 P.2d 426].)

[*494] This court is not infrequently called upon to resolve the tension of apparent or actual conflicts in the express will of the people. [3] Whether that expression emanates directly from the ballot or indirectly through legislative implementation, each deserves our fullest estimation and effectuation. Given the historical and abiding role of government by initiative, I decline to circumvent that responsibility and accept uncritically the Legislature's self-validating statutory scheme as the basis for approving [***100] the exercise [**243] of its prerogative. It is not enough to say a broader constitutional analysis yields the same result and therefore is unnecessary. We provide a higher quality of justice harmonizing rather than ignoring the divers voices of the people, for such is the nature of our office.

> 3 See, e.g., *Zumwalt* v. *Superior Court* (1989) 49 Cal.3d 167 [260 Cal.Rptr. 545, 776 P.2d 247]; *Los Angeles County Transportation Com.* v. *Richmond* (1982) 31 Cal.3d 197 [182 Cal.Rptr. 324, 643 P.2d 941]; *California Housing Finance Agency* v. *Patitucci* (1978) 22 Cal.3d 171 [148 Cal.Rptr. 875, 583 P.2d 729]; *California Housing Finance Agency* v. *Elliott* (1976) 17 Cal.3d 575

[131 Cal.Rptr. 361, 551 P.2d 1193]; *Blotter* v. *Farrell* (1954) 42 Cal.2d 804 [270 P.2d 481]; *Dean* v. *Kuchel* , *supra* , 37 Cal.2d 97; *Hunt* v. *Mayor & Council of Riverside* , *supra* , 31 Cal.2d 619.

TAB "10"

LEXSEE

Positive
As of: Jun 25, 2010

CITY OF MERCED, Plaintiff and Appellant, v. THE STATE OF CALIFORNIA et al., Defendants and Respondents

Civ. No. 7590

Court of Appeal of California, Fifth Appellate District

153 Cal. App. 3d 777; 200 Cal. Rptr. 642; 1984 Cal. App. LEXIS 1824

March 27, 1984

SUBSEQUENT HISTORY: [***1] Appellant's petition for a hearing by the Supreme Court was denied May 24, 1984.

PRIOR HISTORY: Superior Court of Merced County, No. 69797, George G. Murry, Judge.

DISPOSITION: The judgment is affirmed.

CASE SUMMARY:

PROCEDURAL POSTURE: Appellant, the city of Merced, sought review of an order of the Superior Court of Merced County (California), that denied a petition for a writ of mandamus to compel payment of the costs of business goodwill incurred in an eminent domain proceeding.

OVERVIEW: Appellant, the City of Merced, was ordered to pay $ 72,350 to land owners in a condemnation action. Appellant applied to respondent, State of California, for reimbursement of that amount, and filed a petition for writ of mandamus to compel reimbursement when respondent refused to pay. The lower court denied the petition. The court affirmed the denial of the writ of mandamus and held that whether a city or county decided to exercise eminent domain was, essentially, an option of the city or county, rather than a mandate of the state. The court found that the fundamental concept was that the city or county was not required to exercise eminent domain, but if the power of eminent domain was exercised, then the city would be required to pay for loss of goodwill and the payment for loss of goodwill was not a state-mandated cost.

OUTCOME: The court affirmed the order of the lower court that denied a petition for a writ of mandamus to compel respondent. State of California, to reimburse appellant, city of Merced, for the costs of business goodwill incurred in an eminent domain proceeding because the costs were not state mandated.

CORE TERMS: state-mandated, business goodwill, reimbursement, eminent domain, mandated, optional, goodwill, eminent domain laws, loss of goodwill, local agency, legal theory, eminent domain proceeding, writ of mandamus, line item, reasonable alternatives, discretionary, accorded, revised, incur, system of law, state agency, business conducted, statutes enacted, condemnation, acquisition, recodified, acquire, italics, executive order, question of law

LexisNexis(R) Headnotes

Civil Procedure > Appeals > Standards of Review > General Overview

[HN1]The appellate court is not limited by the interpretation of statutes by the trial court.

Governments > Legislation > Interpretation

[HN2]The meaning of a statute must, in the first instance, be sought in the language in which it is framed, and if that is plain the sole judicial function is to enforce

it according to its terms; where the language is clear there is no room for interpretation. And courts will not determine the wisdom, desirability, or propriety of statutes enacted by the legislature.

Governments > Legislation > Interpretation
[HN3]Every statute should be construed with reference to the whole system of law of which it is a part so that all may be harmonized and have effect.

Civil Procedure > Appeals > Standards of Review > Clearly Erroneous Review
Governments > Legislation > Interpretation
[HN4]Administrative interpretations of statutes should be accorded great respect and followed if not clearly erroneous. The court also relies on extrinsic aids such as the history of relevant statutes, committee reports, and the legislative debates.

Governments > State & Territorial Governments > Finance
[HN5]See Cal. Rev. & Tax. Code § 2231(a).

Governments > State & Territorial Governments > Finance
[HN6]See Cal. Rev. & Tax. Code § 2207.

Civil Procedure > Eminent Domain Proceedings > General Overview
[HN7]See Cal. Civ. Proc. Code § 1263.510.

Governments > State & Territorial Governments > Finance
[HN8]See Cal. Rev. & Tax. Code § 2207(h).

SUMMARY:

CALIFORNIA OFFICIAL REPORTS SUMMARY

The trial court entered judgment denying a city's petition for a writ of mandamus to compel payment of its claim against the State of California for costs of business goodwill it incurred in an eminent domain proceeding as a result of the enactment of Stats. 1975, ch. 1275, which revised and recodified the state's eminent domain laws. The revisions included a new requirement that, upon proof of satisfaction of certain stated conditions, the owner of a business conducted on the condemned property is entitled to compensation for loss of goodwill (Code Civ. Proc., § 1263.510). In entering judgment denying the writ, the court concluded that the state was liable to the city for payment of business goodwill, but that the court could not order subvention from state funds. (Superior Court of Merced County, No. 69797, George G. Murry, Judge.)

The Court of Appeal affirmed. The court held that the city's payment for business goodwill in a condemnation proceeding it elected to pursue did not constitute the payment of a state-mandated cost pursuant to Rev. & Tax. Code, § 2231, subd. (a), and Rev. & Tax. Code, § 2207. In so ruling, the court held that the Legislature made clear the discretionary nature of the acquisition of property by eminent domain by the passage of Code Civ. Proc., § 1230.030 (also included within Stats. 1975, ch. 1275). Thus, the court held that the Legislature intended for payment of business goodwill to be discretionary as well, and that such an increased cost so incurred as a result of the enactment of the revised eminent domain laws was not a cost which the city was required or mandated to incur. (Opinion by Hamlin, J., with Franson, Acting P. J., and Zenovich, J., concurring.)

HEADNOTES

CALIFORNIA OFFICIAL REPORTS HEADNOTES
Classified to California Digest of Official Reports, 3d Series

(1) Appellate Review § 55 -- Presenting and Preserving Questions in Trial Court -- Adherence to Theory of Case -- Assertion of New Legal Theory on Appeal. --On appeal from the denial of a city's petition for a writ to compel the state to pay the city for the costs of business goodwill incurred in an eminent domain proceeding, it was permissible for defendants to assert a new legal theory. Although defendants argued for the first time on appeal that in governmental-entity-initiated eminent domain proceedings, payment for business goodwill pursuant to the requirements of Stats. 1975, ch. 1275 (which revised and recodified the state's eminent domain laws), is not a state-mandated cost subject to reimbursement by the state, which argument was a change in defendants' position from its answer to the petition and its stipulation at the hearing on the petition, such issue was purely a question of law. Thus, since the appellate court is not limited by the interpretation of statutes by the trial court, on appeal defendants could correct a position mistakenly taken in the trial court that allegedly was inconsistent with the clear manifestation of the intent of the Legislature.

(2a) (2b) (2c) Eminent Domain § 22 -- Compensable Property and Rights -- Business Goodwill -- Payment by City -- Reimbursement From State --

State-mandated Cost. --A city's payment for business goodwill in a condemnation proceeding it elected to pursue did not constitute the payment of a state-mandated cost under Rev. & Tax. Code, § 2231, subd. (a), and Rev. & Tax. Code, § 2207. Although Stats. 1975, ch. 1275, which revised and recodified the state's eminent domain laws, included the requirement that upon proof of satisfaction of certain stated conditions the owner of a business conducted on the condemned property is entitled to compensation for a loss of goodwill (Code Civ. Proc., § 1263.510), the Legislature made clear the discretionary nature of acquisition of property by eminent domain by the passage of Code Civ. Proc., § 1230.030 (also included within Stats. 1975, ch. 1275). Thus, the Legislature intended for payment of goodwill to be discretionary, and such an increased cost so incurred as a result of the enactment of the revised eminent domain laws was not a cost which the county was required or mandated to incur.

(3) Statutes § 28 -- Construction -- Language -- Harmony With Whole System of Law. --The meaning of a statute must, in the first instance, be sought in the language in which it is framed, and if that is plain the sole judicial function is to enforce it according to its terms. Where the language is clear there is no room for interpretation. Moreover, courts will not determine the wisdom, desirability, or propriety of statutes enacted by the Legislature. Additionally, every statute should be construed with reference to the whole system of law of which it is a part so that all may be harmonized and have effect. Furthermore, administrative interpretations of statutes should be accorded great respect and followed if not clearly erroneous.

(4) Appellate Review § 135 -- Review -- Presumptions -- Finding by State Agency. --A finding by a state agency is accorded great weight unless it is shown to be clearly erroneous.

COUNSEL: Steven F. Nord, City Attorney, for Plaintiff and Appellant.

John K. Van de Kamp, Attorney General, N. Eugene Hill, Assistant Attorney General, and Geoffrey L. Graybill, Deputy Attorney General, for Defendants and Respondents.

JUDGES: Opinion by Hamlin, J., with Franson, Acting P. J., and Zenovich, J., concurring.

OPINION BY: HAMLIN

OPINION

[*779] [**643] The Case

By its petition for writ of mandamus and its complaint for declaratory judgment plaintiff sought to compel payment of its claim against the State of California (the State) for costs of business goodwill it incurred in an eminent domain proceeding as a result of the enactment of chapter 1275, Statutes of 1975. Specifically, plaintiff asked the court to order the State Controller to pay plaintiff $ 71,350, plus interest, from a "State budget line item he deems appropriate" or, alternatively, to direct the State Controller to pay the amount from a line item the court deems appropriate. The trial court concluded that the [***2] State was liable to plaintiff for payment of business goodwill, but that the court could not order subvention from state funds. It therefore entered judgment denying the peremptory writ of mandamus. Plaintiff filed a timely notice of appeal.

[*780] On appeal, defendants argue for the first time, as we believe they may, that plaintiff's payment for business goodwill in a condemnation proceeding it elected to pursue does not constitute a state-mandated cost. We agree and find it unnecessary to discuss the other contentions of the parties.

The Facts

We include only a brief statement of the undisputed facts which are essential to resolution of the pivotal legal issue involved, i.e., whether plaintiff's payment for business goodwill in the proceeding it initiated to condemn property for its use is a state-mandated cost.

On April 8, 1980, the Merced County Superior Court entered a final order of condemnation in the case entitled City of Merced v. Rodney Barbour and Thomas L. Barbour. This order required plaintiff to pay, along with other sums, $ 71,350 allocated to loss of goodwill pursuant to the provisions of Code of Civil Procedure section 1263.510 [***3] . Plaintiff applied to the State for reimbursement of that amount under the provisions of Revenue and Taxation Code section 2201 et seq. Plaintiff's application for reimbursement was directed to the State Board of Control. That board approved plaintiff's claim. It was included, along with other similar claims, as a line item in chapter 1090, Statutes of 1981. [**644] The Legislature deleted from chapter 1090 all claims seeking reimbursement for business goodwill under chapter 1275, Statutes of 1975 (1275 claims). Additionally, the Legislature included in chapter 1090, as amended, a direction that the Board of Control not accept, or submit to the Legislature, any more 1275 claims.

After plaintiff received notice of the above-mentioned action of the Legislature, it initiated this case.

Discussion

I. *The State may assert a new legal theory on appeal.*

(1) Defendants admitted in their answer to the petition for writ of mandamus that chapter 1275, Statutes of 1975, mandated a new program or increased level of service under provisions of the Revenue and Taxation Code. At the hearing on the petition, defendants stipulated to the same effect [***4] and added that plaintiff had not requested that mandate. For the first time on appeal, defendants argue that in governmental-entity-initiated eminent domain proceedings payment for business goodwill pursuant to the requirements of chapter 1275, Statutes of 1975, is not a state-mandated cost subject to reimbursement by the State. Defendants admit this represents a change [*781] in their position but that they mistakenly took a position in the trial court inconsistent with the clear manifestation of the intent of the Legislature.

To support their position that defendants may argue on appeal at variance with their answer and admission in the trial court, defendants rely on *Barton* v. *Owen* (1977) 71 Cal.App.3d 484 [139 Cal.Rptr. 494]. There the plaintiff sought medical treatment from defendant for acute sinusitis. After a series of unsuccessful treatments, plaintiff developed a brain abscess which resulted in a prefrontal lobotomy. The plaintiff tried the case on the theory that the physician was negligent in not taking a culture and sensitivity test as part of his diagnosis. He did not prevail. On appeal, plaintiff argued the trial court erred in instructing [***5] the jury on contributory negligence. Additionally, plaintiff stated a new theory that failure to take the culture and sensitivity test was negligence as a matter of law. The court allowed the new legal theory on appeal.

Plaintiff points to 3 Witkin, California Procedure (2d ed. 1971) Pleadings, sections 342-344, pages 2009-2011, for the general rule that an admission of fact may not be argued differently on appeal. We agree, but that is not what defendants seek to do. Here, the question of whether a cost is state-mandated is purely a question of law. [HN1]This court is not limited by the interpretation of statutes by the trial court. (See *In re Davis* (1978) 87 Cal.App.3d 919, 921 [151 Cal.Rptr. 29]; *Barton* v. *Owen, supra*, 71 Cal.App.3d at p. 491.) Thus defendants may argue their new legal theory on appeal.

II. *Payment of goodwill is not a state-mandated cost.*

(2a) By this appeal, plaintiff seeks to compel reimbursement of its payment for business goodwill in a proceeding to acquire property under its power of eminent domain. Plaintiff can succeed only if the payment for which it seeks reimbursement was a state-mandated cost. [***6] Our decision on this issue turns upon the meaning of various statutory provisions. (3) In examining the relevant statutes we apply the basic rules of statutory construction stated by the court in *Marin Hospital Dist.* v. *Rothman* (1983) 139 Cal.App.3d 495, 498-499 [188 Cal.Rptr. 828]. "[HN2]The meaning of a statute must, in the first instance, be sought in the language in which it is framed, and if that is plain the sole judicial function is to enforce it according to its terms [citation]; where the language is clear there is no room for interpretation [citation]. And courts will not determine the *wisdom*, desirability, or propriety of statutes enacted by the Legislature. [Citation.]

"'Moreover, "[HN3]every statute should be construed with reference to the whole system of law of which it is a part so [**645] that all may be harmonized and [*782] have effect."' (*Select Base Materials* v. *Board of Equal.* (1959) 51 Cal.2d 640, 645 . . . .) We inquire further into 'the whole system of law of which [Government Code section 26912] is a part.'" (Italics in original.)

Also applicable in this case is [***7] the rule that [HN4]administrative interpretations of statutes should be accorded great respect and followed if not clearly erroneous. (*Noroian* v. *Department of Administration* (1970) 11 Cal.App.3d 651, 655 [89 Cal.Rptr. 889].) We also rely on extrinsic aids such as the history of relevant statutes, committee reports, and the legislative debates. (*Ibid.*)

(2b) Revenue and Taxation Code section 2231, subdivision (a), includes a direction that: "[HN5]The state shall reimburse each local agency for all 'costs mandated by the state', as defined in Section 2207 . . . ." Section 2207, in turn, provides in pertinent part: "[HN6]'Costs mandated by the state' means any increased costs which a local agency is required to incur as a result of the following: [para.] (a) Any law enacted after January 1, 1973, which mandates a new program or an increased level of service of an existing program; . . ."

Chapter 1275, Statutes of 1975 (Code Civ. Proc., § 1230.010 et seq.) revised and recodified the eminent domain laws of this state. The revisions included a new requirement that, upon proof of satisfaction of [***8] four stated conditions, the owner of a business conducted on the condemned property is entitled to compensation for loss of goodwill (Code Civ. Proc., § 1263.510). [1]

1 Code of Civil Procedure section 1263.510 provides: "(a) [HN7]The owner of a business conducted on the property taken, or on the remainder if such property is part of a larger parcel, shall be compensated for loss of goodwill if the owner proves all of the following:

"(1) The loss is caused by the taking of the property or the injury to the remainder.

"(2) The loss cannot reasonably be prevented by a relocation of the business or by taking steps and adopting procedures that a reasonably prudent person would take and adopt in preserving the goodwill.

"(3) Compensation for the loss will not be included in payments under Section 7262 of the Government Code.

"(4) Compensation for the loss will not be duplicated in the compensation otherwise awarded to the owner.

"(b) Within the meaning of this article, 'goodwill' consists of the benefits that accrue to a business as a result of its location, reputation for dependability, skill or quality, and any other circumstances resulting in probable retention of old or acquisition of new patronage."

[***9] The costs for which plaintiff seeks reimbursement in this proceeding were incurred by reason of this newly imposed obligation to compensate for loss of business goodwill. [2] This squarely presents the issue which we conclude [*783] is dispositive of plaintiff's appeal, i.e., is the increased cost so incurred as a result of enactment of chapter 1275, Statutes of 1975, a cost which plaintiff was *required* or *mandated* to incur?

2 Until enactment of chapter 1275, Statutes of 1975, goodwill was not compensable in eminent domain proceedings. (See 5 Witkin, Summary of Cal. Law (8th ed. 1974) Constitutional Law, § 586, p. 3882.)

In support of the statutory construction it urges, plaintiff points to the Board of Control's decision in March 1981 that 1275 claims were for reimbursement of state-mandated costs. (4) Plaintiff correctly notes that such a finding by a state agency is accorded great weight unless shown to be clearly erroneous. (*Noroian v. Department of Administration, supra,* 11 Cal.App.3d at p. 655.) [***10]

(2c) Defendants counter that the Legislature declared its intent that 1275 claims not be considered state-mandated by rejecting the line item of the budget providing funds for payment of 1275 claims and by directing that the Board of Control not approve or submit to the Legislature any more 1275 claims. (Stats. 1981, ch. 1090.) Defendants rely on *Tyler v. State of California* (1982) 134 Cal.App.3d 973, 977 [162 Cal.Rptr. 82], to support their position that, where a statute is unclear, a later expression of the Legislature bearing upon the intent of the prior statute may be properly [**646] considered in determining the effect and meaning of the prior statute.

More significantly, defendants argue that the Legislature made clear the discretionary nature of acquisition of property by eminent domain by passage of Code of Civil Procedure section 1230.030. Section 1230.030 was included within chapter 1275, Statutes of 1975, the same legislation that changed the law of eminent domain to require compensation for business goodwill. Section 1230.030 provides: "Nothing in this title requires that the power of eminent domain [***11] be exercised to acquire property necessary for public use. Whether property necessary for public use is to be acquired by purchase or other means or by eminent domain is a decision left to the discretion of the person authorized to acquire the property."

We agree that the Legislature intended for payment of goodwill to be discretionary. The above authorities reveal that whether a city or county decides to exercise eminent domain is, essentially, an option of the city or county, rather than a mandate of the state. The fundamental concept is that the city or county is not required to exercise eminent domain. If, however, the power of eminent domain is exercised, then the city will be required to pay for loss of goodwill. Thus, payment for loss of goodwill is not a state-mandated cost.

This construction is confirmed by subsequent legislative actions, including the enactment of Senate Bill No. 90 (Russell), 1979-1980 Regular Session. [*784] Among other things, that bill (Sen. Bill No. 90) added Revenue and Taxation Code section 2207, subdivision (h):

"[HN8]'Costs mandated by the state' means any increased costs which a local agency is required to incur [***12] as the result of the following:

". . . .

"(h) Any statute enacted after January 1, 1973, or executive order issued after January 1, 1973, which adds new requirements to an existing optional program or service and thereby increases the cost of such program or service if the local agencies have no reasonable alternatives other than to continue the optional program."

Senate Bill No. 90 became effective on July 1, 1981, after plaintiff incurred the cost of business goodwill for which it seeks reimbursement. Subdivision (h) appears to have been included in the bill to provide for reimbursement of increased costs in an optional program such as eminent domain when the local agency has no reasonable alternative to eminent domain. The legislative history of Senate Bill No. 90 supports the conclusion that subdivision (h) was added to Revenue and Taxation Code section 2207 to extend state liability rather than to clarify existing law. The Report of the Assembly Revenue and Taxation Committee (June 9, 1980) includes a statement:

"*SB 90* further defines 'mandated costs' in Sections 4 and 5 to include the following:

". . . .

"e. Where a statute or executive [***13] order adds *new requirements to an existing optional program*, which increases costs if the local agency has no reasonable alternative than to continue that optional program." (Rep., p. 1, italics in original.)

Additionally, the Ways and Means Committee's Staff Analysis (Aug. 4, 1980) notes that Senate Bill No. 90: "Expands the definition of *local* reimbursable costs mandated and paid by the state to include:

". . . .

"e. Statutes or executive orders adding *new requirements to an existing optional program*, which increases costs if the local agency has no reasonable alternative than to continue that optional program." (P. 2, italics in original.)

[*785] Both reports quoted above characterize Senate Bill No. 90 as expanding the definition of local reimbursable costs. The Legislative Analyst's Report of July 30, 1980, on Senate Bill No. 90 similarly includes a [**647] statement that the bill expands the definition of state-mandated costs. Such characterizations of the purpose of Senate Bill No. 90 are consistent only with the conclusion that, until that bill was enacted, increased costs incurred in an optional program such as eminent domain were not state-mandated. [***14] Thus the cost of business goodwill for which plaintiff was required by chapter 1275, Statutes of 1975, to pay in April 1980, was not a state-mandated cost. It follows that the trial court properly denied the petition for a writ of mandamus to compel payment of that cost. Our conclusion on this pivotal issue makes it unnecessary to consider plaintiff's contentions that article XIII B of the California Constitution requires the State to provide a subvention of funds to reimburse state-mandated costs, that there are appropriated funds available to pay plaintiff's claim, and that a peremptory writ of mandate is the appropriate remedy in this case.

The judgment is affirmed.

TAB "11"

COUNTY OF LOS ANGELES et al., Plaintiffs and Appellants, v. COMMISSION ON STATE MANDATES, Defendant and Appellant; REGIONAL WATER QUALITY CONTROL BOARD, LOS ANGELES REGION, Real Party in Interest and Respondent. CITY OF ARTESIA et al., Plaintiffs and Appellants, v. COMMISSION ON STATE MANDATES, Defendant and Appellant; REGIONAL WATER QUALITY CONTROL BOARD, LOS ANGELES REGION, Real Party in Interest and Respondent.

B183981

COURT OF APPEAL OF CALIFORNIA, SECOND APPELLATE DISTRICT, DIVISION THREE

150 Cal. App. 4th 898; 58 Cal. Rptr. 3d 762; 2007 Cal. App. LEXIS 711; 2007 Cal. Daily Op. Service 5216; 37 ELR 20107

May 10, 2007, Filed

PRIOR HISTORY: [***1] Superior Court of Los Angeles County, Nos. BS089769 and BS089785, Victoria G. Chaney, Judge.

DISPOSITION: Affirmed.

CASE SUMMARY:

PROCEDURAL POSTURE: The Superior Court of Los Angeles County, California, issued a writ of mandate directing defendant California Commission on State Mandates to set aside its decisions affirming its executive director's rejections of test claims presented by plaintiffs, a county and cities, and to consider fully the claims and determine whether plaintiffs were entitled to reimbursement without consideration of Gov. Code, § 17516, subd. (c). The Commission appealed.

OVERVIEW: Plaintiffs cross-appealed. The court held that § 17516, subd. (c), was unconstitutional to the extent it exempted regional water quality control boards from the constitutional state mandate subvention requirement. Its creation of an exception for regional boards, which were state agencies, contravened the plain, unequivocal, and all-inclusive reference to "any state agency" in Cal. Const., art. XIII B, § 6. Moreover, a contrary conclusion was not compelled by virtue of the fact that § 17516, subd. (c), essentially mirrored the language of Rev. & Tax. Code, § 2209, subd. (c). A statute could not trump the constitution. The court found persuasive the Commission's position that should it conclude § 17516, subd. (c), was unconstitutional, the appropriate remedy was to afford the Commission the opportunity to pass on the merits of the subject test claims on the issues of whether: (1) the subject permit qualified as a state mandated program under art. XIII B, § 6; (2) the permit amounted to a new program or higher level of service; and (3) the permit imposed costs on local entities. The court concluded that plaintiffs' cross-appeal, which was simply protective in nature, was moot.

OUTCOME: The court affirmed the trial court's judgment.

CORE TERMS: regional, water boards, subvention, local governments, state mandate, reimbursement, executive order, mandated, local agencies, levels of service, new program, state agency, test claim, subvention of funds, cause of action, water quality, writ of mandate directing, federal mandate, federal law, Clean Water Act, order issued, cross-appeal, state law, pollution, pollutants, funding, statute of limitations, implementing, carrying, demurrer

LexisNexis(R) Headnotes

Governments > Local Governments > Finance
Governments > State & Territorial Governments > Finance
[HN1]See Cal. Const., art. XIII B, § 6.

Governments > Local Governments > Finance
Governments > State & Territorial Governments > Finance
[HN2]"Subvention" generally means a grant of financial aid or assistance, or a subsidy. As used in connection with state-mandated costs, the basic legal requirements of subvention can be easily stated; it is in the application of the rule that difficulties arise. Essentially, the constitutional rule of state subvention provides that the state is required to pay for any new governmental programs, or for higher levels of service under existing programs, that it imposes upon local governmental agencies. This does not mean that the state is required to reimburse local agencies for any incidental cost that may result from the enactment of a state law; rather, the subvention requirement is restricted to governmental services which the local agency is required by state law to provide to its residents. The subvention requirement is intended to prevent the state from transferring the costs of government from itself to local agencies. Reimbursement is required when the state freely chooses to impose on local agencies any peculiarly governmental cost which they were not previously required to absorb.

Governments > Local Governments > Finance
Governments > State & Territorial Governments > Finance
[HN3]The subvention requirement of Cal. Const., art. XIII B, § 6, is triggered if the legislature or any state agency mandates a new program or higher level of service. Cal. Const., art. XIII B, § 6. Such requirement is inapplicable where the additional costs on local governments are imposed by a federal mandate, i.e., the federal government. Cal. Const., art. XIII B, § 9, subd. (b), defines federally mandated appropriations as those required to comply with mandates of the courts or the federal government which, without discretion, require an expenditure for additional services or which unavoidably make the provision of existing services more costly.

Governments > Local Governments > Finance
Governments > State & Territorial Governments > Finance
[HN4]Whether a particular cost incurred by a local government arises from carrying out a state mandate for which subvention is required under Cal. Const., art. XIII B, § 6, is a matter for the California Commission on State Mandates to determine in the first instance. A local government initiates the process for subvention under Cal. Const., art. XIII B, § 6, by filing a claim with the Commission. Gov. Code, § 17521. The initial claim is referred to as a test claim. Gov. Code, § 17521. The provisions of Gov. Code, § 17500 et seq., provide the sole and exclusive procedure by which a local agency may claim reimbursement for costs mandated by the state as required by Cal. Const., art. XIII B, § 6. Gov. Code, § 17552.

Governments > Local Governments > Finance
Governments > State & Territorial Governments > Finance
[HN5]The legislature has created a quasi-judicial body called the California Commission on State Mandates, Gov. Code, § 17525, to hear and decide upon any claim by a local government that the local government is entitled to be reimbursed by the state for costs as required by Cal. Const., art. XIII B, § 6. Gov. Code, § 17551, subd. (a). It has defined "costs" as costs mandated by the state -- any increased costs that the local government is required to incur as a result of any statute, or any executive order implementing any statute, which mandates a new program or higher level of service of any existing program within the meaning of Cal. Const., art. XIII B, § 6. Gov. Code, § 17514. Finally, in Gov. Code, § 17556, subd. (d), it has declared that the Commission shall not find costs mandated by the state if, after a hearing, the Commission finds that the local government has the authority to levy service charges, fees, or assessments sufficient to pay for the mandated program or increased level of service.

Civil Procedure > Pleading & Practice > Defenses, Demurrers & Objections > Demurrers
Civil Procedure > Pretrial Judgments > Judgment on the Pleadings
Civil Procedure > Appeals > Standards of Review > De Novo Review
[HN6]A motion for judgment on the pleadings is the equivalent of a general demurrer but is made after the time for demurrer has expired. The rules governing demurrers apply. The grounds for a motion for judgment on the pleadings must appear on the face of the challenged complaint or be based on facts which the court may judicially notice. On review, an appellate court must deter-

mine if the complaint states a cause of action as a matter of law. The appellate court reviews the complaint de novo to determine whether it alleges facts sufficient to state a cause of action under any legal theory.

Civil Procedure > Remedies > Writs > Common Law Writs > Mandamus
Civil Procedure > Appeals > Standards of Review > De Novo Review
Civil Procedure > Appeals > Standards of Review > Substantial Evidence > General Overview
[HN7]In reviewing a trial court's ruling on a writ of mandate, an appellate court is ordinarily confined to an inquiry as to whether the findings and judgment of the trial court are supported by substantial evidence. However, where the facts are undisputed and the issues present questions of law, the appellate court is not bound by the trial court's decision but may make its own determination.

Constitutional Law > The Judiciary > Case or Controversy > Constitutionality of Legislation > General Overview
Governments > Legislation > Statutes of Limitations > Time Limitations
[HN8]See Code Civ. Proc., § 341.5.

Civil Procedure > Pleading & Practice > Defenses, Demurrers & Objections > Affirmative Defenses > General Overview
Civil Procedure > Pleading & Practice > Defenses, Demurrers & Objections > Demurrers
[HN9]The time-bar of a statute of limitations may be raised by demurrer where the complaint discloses on its face that the statute of limitations has run on the causes of action stated in the complaint, for the reason that it fails to state facts sufficient to state a cause of action. Forfeiture of a time-bar defense transpires by the failure to raise the applicable statute of limitations in the answer.

Civil Procedure > Remedies > Writs > Common Law Writs > Mandamus
Governments > Legislation > Statutes of Limitations > Equitable Estoppel
Governments > Legislation > Statutes of Limitations > Waivers
[HN10]If a time limit in a mandamus proceeding is held to be jurisdictional, estoppel or waiver cannot extend the time.

Constitutional Law > The Judiciary > Case or Controversy > Constitutionality of Legislation > General Overview
Governments > Legislation > Statutes of Limitations > Time Limitations
[HN11]The time-bar of Code Civ. Proc., § 341.5, applies to a challenge to the constitutionality of any statute relating to state funding for counties and other local governmental entities, not to a challenge to an action by an administrative agency.

Civil Procedure > Appeals > Reviewability > Preservation for Review
Governments > Legislation > Statutes of Limitations > Time Limitations
[HN12]Case law does not stand for the proposition that the bar of the applicable statute of limitations may be raised for the first time on appeal.

Environmental Law > Water Quality > Clean Water Act > Discharge Permits > General Overview
[HN13]Part of the federal Clean Water Act, 33 U.S.C. § 1251 et seq., is the National Pollutant Discharge Elimination System (NPDES), the primary means for enforcing effluent limitations and standards under the Clean Water Act. The NPDES sets out the conditions under which the federal Environmental Protection Agency or a state with an approved water quality control program can issue permits for the discharge of pollutants in wastewater. 33 U.S.C. § 1342(a) & (b). In California, wastewater discharge requirements established by the regional water quality control boards (regional water boards) are the equivalent of the NPDES permits required by federal law. Wat. Code, § 13374. California's Porter-Cologne Act, Wat. Code, § 13000 et seq., establishes a statewide program for water quality control. Nine regional water boards, overseen by the California Water Board, administer the program in their respective regions. Wat. Code, §§ 13140, 13200 et seq., 13240, and 13301. Wat. Code, §§ 13374 and 13377, authorize the regional water board to issue federal NPDES permits for five-year periods. 33 U.S.C. § 1342, subd. (b)(1)(B).

Governments > Local Governments > Finance
Governments > State & Territorial Governments > Finance
[HN14]See Gov. Code, § 17556, subd. (c).

Governments > State & Territorial Governments > General Overview

[HN15]See Rev. & Tax. Code, § 2209, subd. (c).

Constitutional Law > State Constitutional Operation
[HN16]In construing the meaning of Cal. Const., art. XIII B, § 6, a court's inquiry is not focused on what the legislature intended in adopting the former statutory reimbursement scheme, but rather on what the voters meant when they adopted art. XIII B, § 6. To determine this intent, the court must look to the language of the provision itself.

Governments > Local Governments > Finance
Governments > State & Territorial Governments > Finance
[HN17]The subvention requirement of Cal. Const., art. XIII B, § 6, applies whenever the legislature or any state agency mandates a new program or higher level of service. The all-encompassing "any state agency" language defeats any perceived presumption that the electorate intended to incorporate into Cal. Const., art. XIII B, § 6, the exclusion of a particular state agency from its subvention requirement.

Constitutional Law > The Judiciary > Case or Controversy > Constitutionality of Legislation > General Overview
Environmental Law > Water Quality > General Overview
Governments > Local Governments > Finance
Governments > State & Territorial Governments > Finance
[HN18]The constitutional infirmity of Gov. Code, § 17516, subd. (c), is readily apparent from its plain language that the definition of "executive order" does not include any order, plan, requirement, rule, or regulation issued by the California Water Board or by any regional water quality control board (regional water board) pursuant to Division 7 (commencing with Wat. Code, § 13000) of the California Water Code. § 17516, subd. (c). This exclusion of any order issued by any regional water board contravenes the clear, unequivocal intent of Cal. Const., art. XIII B, § 6, that subvention of funds is required whenever any state agency mandates a new program or higher level of service on any local government. § 17516, subd. (c). Therefore, § 17516, subd. (c), is unconstitutional to the extent it excludes any order issued by any regional water board pursuant to Division 7 (commencing with Wat. Code, § 13000) of the Water Code from the definition of "executive order." This conclusion leads to the further conclusion that whether one or both of the subject two obligations constitutes a state mandate necessitating subvention of funds under Cal. Const., art. XIII B, § 6, is an issue that must in the first instance be resolved by the California Commission on State Mandates.

SUMMARY:

CALIFORNIA OFFICIAL REPORTS SUMMARY

The trial court issued a writ of mandate directing the Commission on State Mandates to set aside its decisions affirming its executive director's rejections of test claims presented by a county and several cities and to consider fully the test claims and determine whether the county and the cities were entitled to reimbursement without consideration of Gov. Code, § 17516, subd. (c). The county and the cities sought reimbursement for carrying out obligations required by a National Pollutant Discharge Elimination System Permit for municipal stormwater and urban runoff discharges that was issued by the Regional Water Quality Control Board (Regional Water Board), Los Angeles Region. (Superior Court of Los Angeles County, Nos. BS089769 and BS089785, Victoria G. Chaney, Judge.)

The Court of Appeal affirmed the judgment, holding that Gov. Code, § 17516, subd. (c), is unconstitutional to the extent that it exempts regional water boards from the constitutional state mandate subvention requirement. Its creation of an exception for regional water boards, which are state agencies, contravenes the plain, unequivocal, and all-inclusive reference to "any state agency" in Cal. Const., art. XIII B, § 6. Moreover, a contrary conclusion was not compelled by virtue of the fact that § 17516, subd. (c), essentially mirrors the language of Rev. & Tax. Code, § 2209, subd. (c). A statute cannot trump the constitution. The court found persuasive the commission's position that should the court conclude § 17516, subd. (c), was unconstitutional, the appropriate remedy was to afford the commission the opportunity to pass on the merits of the subject test claims on the issues of whether: (1) the subject permit qualified as a state mandated program under Cal. Const., art. XIII B, § 6; (2) the permit amounted to a new program or higher level of service; and (3) the permit imposed costs on local entities (Gov. [*899] Code, §§ 17514, 17556). A cross-appeal filed by the county and the cities was premised on the theory that if subvention of funds from the commission was foreclosed by § 17516, subd. (c), they were entitled to pursue an independent action against the Regional Water Board, Los Angeles Region. Accordingly, the court concluded that the cross-appeal, which was simply protective in nature, was moot. (Opinion by Aldrich, J., with Klein, P. J., and Croskey, J., concurring.)

HEADNOTES

CALIFORNIA OFFICIAL REPORTS HEADNOTES
Classified to California Digest of Official Reports

(1) State of California § 11--Fiscal Matters--Reimbursement to Local Governments--New Programs and Services--Subvention.--"Subvention" generally means a grant of financial aid or assistance, or a subsidy. As used in connection with state-mandated costs, the basic legal requirements of subvention can be easily stated; it is in the application of the rule that difficulties arise. Essentially, the constitutional rule of state subvention provides that the state is required to pay for any new governmental programs, or for higher levels of service under existing programs, that it imposes upon local governmental agencies. This does not mean that the state is required to reimburse local agencies for any incidental cost that may result from the enactment of a state law; rather, the subvention requirement is restricted to governmental services which the local agency is required by state law to provide to its residents. The subvention requirement is intended to prevent the state from transferring the costs of government from itself to local agencies. Reimbursement is required when the state freely chooses to impose on local agencies any peculiarly governmental cost which they were not previously required to absorb. The subvention requirement of Cal. Const., art. XIII B, § 6, is triggered if the Legislature or any state agency mandates a new program or higher level of service (art. XIII B, § 6). Such requirement is inapplicable where the additional costs on local governments are imposed by a federal mandate, i.e., the federal government. Article XIII B, § 9, subd. (b), defines federally mandated appropriations as those required to comply with mandates of the courts or the federal government which, without discretion, require an expenditure for additional services or which unavoidably make the provision of existing services more costly. [*900]

(2) State of California § 11--Fiscal Matters--Reimbursement to Local Governments--New Programs and Service--Subvention--Procedure for Claims.--Whether a particular cost incurred by a local government arises from carrying out a state mandate for which subvention is required under Cal. Const., art. XIII B, § 6, is a matter for the Commission on State Mandates to determine in the first instance. A local government initiates the process for subvention under art. XIII B, § 6, by filing a claim with the commission (Gov. Code, § 17521). The initial claim is referred to as a test claim (§ 17521). The provisions of Gov. Code, § 17500 et seq., provide the sole and exclusive procedure by which a local agency may claim reimbursement for costs mandated by the state as required by art. XIII B, § 6 (Gov. Code, § 17552). The Legislature has created a quasi-judicial body called the Commission on State Mandates, Gov. Code, § 17525, to hear and decide upon any claim by a local government that the local government is entitled to be reimbursed by the state for costs as required by Cal. Const., art. XIII B, § 6 (Gov. Code, § 17551, subd. (a)). It has defined "costs" as costs mandated by the state--any increased costs that the local government is required to incur as a result of any statute, or any executive order implementing any statute, which mandates a new program or higher level of service of any existing program within the meaning of Cal. Const., art. XIII B, § 6 (Gov. Code, § 17514). Finally, in Gov. Code, § 17556, subd. (d), it has declared that the commission shall not find costs mandated by the state if, after a hearing, the commission finds that the local government has the authority to levy service charges, fees, or assessments sufficient to pay for the mandated program or increased level of service.

(3) Limitation of Actions § 28--Defenses--Raising by Demurrer--Forfeiture.--The time bar of a statute of limitations may be raised by demurrer where the complaint discloses on its face that the statute of limitations has run on the causes of action stated in the complaint, for the reason that it fails to state facts sufficient to constitute a cause of action. Forfeiture of a time-bar defense transpires by the failure to raise the applicable statute of limitations in the answer.

(4) Mandamus and Prohibition § 57--Mandamus--Time Limits.--If a time limit in a mandamus proceeding is held to be jurisdictional, estoppel or waiver cannot extend the time.

(5) Limitation of Actions § 5--Validity, Construction, and Application of Statutes--Challenge to Constitutionality--State Funding Statute.--The time bar of Code Civ. Proc., § 341.5, applies to a challenge to the [*901] constitutionality of any statute relating to state funding for counties and other local governmental entities, not to a challenge to an action by an administrative agency.

(6) Pollution and Conservation Laws § 5--Water Pollution--Statewide Program for Quality Control--Administration by Regional Water Quality Control Boards--Issuance of Discharge Permits.--Part of the federal Clean Water Act (33 U.S.C. § 1251 et seq.) is the National Pollutant Discharge Elimination System (NPDES), the primary means for enforcing effluent limitations and standards under the Clean Water Act. The NPDES sets out the conditions under which the federal Environmental Protection Agency or a state with an approved water quality control program can issue permits for the discharge of pollutants in wastewater (33 U.S.C. § 1342(a) & (b)). In California, wastewater discharge requirements established by the Regional Water Quality

Control Boards are the equivalent of the NPDES permits required by federal law (Wat. Code, § 13374). California's Porter-Cologne Act (Wat. Code, § 13000 et seq.) establishes a statewide program for water quality control. Nine regional water boards, overseen by the State Water Board, administer the program in their respective regions (Wat. Code, §§ 13140, 13200 et seq., 13240, and 13301). Wat. Code, §§ 13374 and 13377, authorize the regional water board to issue federal NPDES permits for five-year periods (33 U.S.C. § 1342, subd. (b)(1)(B)).

(7) Constitutional Law § 13--Construction of Constitutions--Language of Enactment--Voters' Intent.--In construing the meaning of Cal. Const., art. XIII B, § 6, a court's inquiry is not focused on what the Legislature intended in adopting the former statutory reimbursement scheme, but rather on what the voters meant when they adopted art. XIII B, § 6. To determine this intent, the court must look to the language of the provision itself.

(8) State of California § 11--Fiscal Matters--Reimbursement to Local Governments--New Programs and Services--Subvention.--The subvention requirement of Cal. Const., art. XIII B, § 6, applies whenever the Legislature or any state agency mandates a new program or higher level of service. The all-encompassing "any state agency" language defeats any perceived presumption that the electorate intended to incorporate into art. XIII B, § 6, the exclusion of a particular state agency from its subvention requirement. [*902]

(9) State of California § 11--Fiscal Matters--Reimbursement to Local Governments--New Programs and Services--Subvention--Unconstitutionality of Conflicting Statute--Order Issued by Regional Water Board.--The constitutional infirmity of Gov. Code, § 17516, subd. (c), is readily apparent from its plain language that the definition of "executive order" does not include any order, plan, requirement, rule, or regulation issued by the State Water Board or by any regional water quality control board pursuant to division 7 (commencing with Wat. Code, § 13000) of the Water Code (§ 17516, subd. (c)). This exclusion of any order issued by any regional water board contravenes the clear, unequivocal intent of Cal. Const., art. XIII B, § 6, that subvention of funds is required whenever any state agency mandates a new program or higher level of service on any local government (§ 17516, subd. (c)). Therefore, § 17516, subd. (c), is unconstitutional to the extent it excludes any order issued by any regional water board pursuant to division 7 (commencing with Wat. Code, § 13000) of the Water Code from the definition of "executive order." This conclusion leads to the further conclusion that whether one or both of the subject two obligations constitutes a state mandate necessitating subvention of funds under Cal. Const., art. XIII B, § 6, is an issue that must in the first instance be resolved by the Commission on State Mandates.

(10) State of California § 11--Fiscal Matters--Reimbursement to Local Governments--New Programs and Services--Subvention--Unconstitutionality of Conflicting Statute--Order Issued by Regional Water Board--Remedy.--Because Gov. Code, § 17516, subd. (c), is unconstitutional to the extent it purports to exempt orders issued by regional water quality control boards from the definition of "executive orders" for which subvention of funds to local governments for carrying out state mandates is required pursuant to Cal. Const., art. XIII B, § 6, a trial court properly issued a writ of mandate directing the Commission on State Mandates to resolve four test claims presented by a county and several cities on the merits without reference to § 17516, subd. (c).

[5 Witkin, Cal. Procedure (4th ed. 1997) Pleading, § 1043; 9 Witkin, Summary of Cal. Law (10th ed. 2005) Taxation, § 119 et seq.]

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No apperance for Real Party in Interest and Respondent.

JUDGES: Aldrich, J., with Klein, P. J., and Croskey, J., concurring.

OPINION BY: Aldrich

OPINION

[**764] **ALDRICH, J.--**

INTRODUCTION

The California Commission on State Mandates (the Commission) appeals from the judgment entered following the partial grant of cross-motions for judgment on the pleadings. The County of Los Angeles, the Los Angeles County Flood Control District, and the Cities of Commerce, Carson, Downey, Hawaiian Gardens, Montebello, Santa Fe Springs, Signal Hill, Artesia, Beverly Hills, La Mirada, Monrovia, Norwalk, Rancho Palos Verdes, San Marino and Westlake Village (collectively, County/Cities) filed a cross-appeal from the judgment.

In 2001, the Regional Water Quality Control Board (Regional Water Board), Los Angeles Region, issued a National Pollutant Discharge Elimination System (NPDES) permit for municipal stormwater and urban runoff discharges, which obligated County/Cities to inspect industrial, [*904] commercial, and construction water treatment facilities (which obligation County/Cities claim [***3] the state previously performed) and to install and maintain trash receptacles at transit stops.

County/Cities presented "test claims" [1] to the executive director of the Commission [**765] seeking reimbursement for carrying out these obligations pursuant to the constitutional requirement for subvention arising from a state mandate (Cal. Const., art. XIII B, § 6). The executive director returned the claims unadjudicated, because they did not involve an executive order under section 17516 of the Government Code (Section 17516(c)). In denying the appeals of County/Cities, the Commission noted it was without authority to declare a statute unconstitutional and concluded that Section 17516(c) excludes from the subvention requirement any order, which includes a permit, issued by the Regional Water Boards of the State Water Resources Control Board (State Water Board).

1 " 'Test claim' means the first claim filed with the commission alleging that a particular statute or executive order imposes costs mandated by the state." (Gov. Code, § 17521.)

[***4] Section 6 of article XIII B of the California Constitution (article XIII B, section 6) provides in pertinent part: [HN1]"Whenever the Legislature or *any state agency* mandates a new program or higher level of service on any local government, the State shall provide a subvention of funds to reimburse that local government for the costs of the program or increased level of service ... ." (Italics added.)

As we shall discuss, Section 17516(c) is unconstitutional to the extent it exempts Regional Water Boards from the constitutional state mandate subvention requirement. Its creation of an exception for Regional Water Boards, which are state agencies, contravenes the plain, unequivocal, and all-inclusive reference to "any state agency" in article XIII B, section 6. Moreover, a contrary conclusion is not compelled by virtue of the fact that Section 17516(c) essentially mirrors the language of section 2209, subdivision (c) (§ 2209(c)) of the Revenue and Taxation Code. A statute cannot trump the Constitution.

We decline to consider the Commission's new claim that the constitutional challenge to Section 17516(c) by County/Cities is barred by the 90-day limitation period [***5] of section 341.5 of the Code of Civil Procedure. This statute of limitations defense, which should have been raised before the trial court, is not cognizable on this appeal. [*905]

The Commission urges that should this court conclude Section 17516(c) is unconstitutional, the appropriate remedy is to afford the Commission the opportunity to pass on the merits of the subject test claims on the issues of whether (1) the subject permit qualifies as a state-mandated program under article XIII B, section 6; (2) the permit amounts to a new program or higher level of service; and (3) the permit imposes costs on local entities (Gov. Code, §§ 17514, 17556). We find its position persuasive.

The cross-appeal filed by County/Cities is premised on the theory that if subvention of funds from the Commission is foreclosed by Section 17516(c), County/Cities are entitled to pursue an independent action against the Regional Water Board, Los Angeles Region (LA Regional Water Board). This cross-appeal, which is simply protective in nature, is moot.

In sum, we uphold the trial court's issuance of a writ of mandate directing the Commission [***6] to set aside its decisions affirming its executive director's rejections of the subject test claims and to consider fully these test claims and determine whether County/Cities are entitled to reimbursement without consideration of

Section 17516(c), and we affirm the judgment in its entirety.

BACKGROUND

1. *Article XIII B, Section 6, Subvention of Funds for State Mandates*

"The electorate approved Proposition 4 in 1979, thus adding article XIII B to the state Constitution. [**766] While the earlier Proposition 13 limited the state and local governments' power to increase taxes (see Cal. Const., art. XIII A, added by initiative measure in Primary Elec. (June 6, 1978)), Proposition 4, the so-called 'Spirit of 13,' imposed a complementary limit on the rate of growth in governmental spending." (*San Francisco Taxpayers Assn. v. Board of Supervisors* (1992) 2 Cal.4th 571, 574 [7 Cal. Rptr. 2d 245, 828 P.2d 147].) This measure also "provided [for] reimbursement to local governments for the costs of complying with certain requirements mandated by the state." (*Long Beach Unified Sch. Dist. v. State of California* (1990) 225 Cal. App. 3d 155, 172 [275 Cal. Rptr. 449].)

"[V]oters were told [***7] that section 6 of Proposition 4 was intended to prevent state government attempts 'to force programs on local governments without the state paying for them.' (Ballot Pamp., Special Statewide Elec. [(Nov. 6, 1979)] p. 18.)" (*County of Sonoma v. Commission on State Mandates* (2000) 84 Cal.App.4th 1264, 1282 [101 Cal. Rptr. 2d 784]; see also *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 56 [233 Cal. Rptr. 38, 729 P.2d 202] [intent was not all local costs arising from compliance with state law to be reimbursable; rather, intent was to prevent "the perceived [*906] attempt by the state to enact legislation or adopt administrative orders creating programs to be administered by local agencies, thereby transferring to those agencies the fiscal responsibility for providing services which the state believed should be extended to the public"].)

"Section 6 was included in article XIII B in recognition that article XIII A of the Constitution severely restricted the taxing powers of local governments. [Citation.] The provision was intended to preclude the state from shifting financial responsibility for carrying out governmental functions onto local entities that were ill equipped [***8] to handle the task. [Citations.] Specifically, it was designed to protect the tax revenues of local governments from state mandates that would require expenditure of such revenues. Thus, although its language broadly declares that the 'state shall provide a subvention of funds to reimburse ... local government for the costs [of a state-mandated new] program or higher level of service,' read in its textual and historical context section 6 of article XIII B requires subvention only when the costs in question can be recovered *solely from tax revenues.*" (*County of Fresno v. State of California* (1991) 53 Cal.3d 482, 487 [280 Cal. Rptr. 92, 808 P.2d 235], original italics; see also *Lucia Mar Unified School Dist. v. Honig* (1988) 44 Cal.3d 830, 836, fn. 6 [244 Cal. Rptr. 677, 750 P.2d 318] [a reimbursement requirement was "enshrined in the Constitution ... to provide local entities with the assurance that state mandates would not place additional burdens on their increasingly limited revenue resources"].)

Article XIII B, section 6 provides: "(a) Whenever the Legislature or any state agency mandates a new program or higher level of service on any local government, the State [***9] shall provide a subvention of funds to reimburse that local government for the costs of the program or increased level of service, except that the Legislature may, but need not, provide such a subvention of funds for the following mandates. [¶] (1) Legislative mandates requested by the local agency affected. [¶] (2) Legislation defining a new crime or changing an existing definition of a crime. [¶] (3) Legislative mandates enacted prior to January 1, 1975, or executive orders or regulations initially implementing legislation enacted prior to January 1, 1975."

[HN2](1) " 'Subvention' generally means a grant of financial aid or assistance, or a [**767] subsidy. [Citation.] As used in connection with state-mandated costs, the basic legal requirements of subvention can be easily stated; it is in the application of the rule that difficulties arise.

"Essentially, the constitutional rule of state subvention provides that the state is required to pay for any new governmental programs, or for higher levels of service under existing programs, that it imposes upon local governmental agencies. [Citation.] This does not mean that the state is required to [*907] reimburse local agencies for any incidental [***10] cost that may result from the enactment of a state law; rather, the subvention requirement is restricted to governmental services which the local agency is required by state law to provide to its residents. [Citation.] The subvention requirement is intended to prevent the state from transferring the costs of government from itself to local agencies. [Citation.] Reimbursement is required when the state 'freely chooses to impose on local agencies *any* peculiarly "governmental" cost which they were not previously required to absorb.' [Citation.]" (*Hayes v. Commission on State Mandates* (1992) 11 Cal.App.4th 1564, at 1577-1578 [15 Cal. Rptr. 2d 547].)

[HN3]The subvention requirement of article XIII B, section 6 is triggered if "the Legislature or any state agency" mandates a new program or higher level of service. (Art. XIII B, § 6.) Such requirement is inapplicable

where the additional costs on local governments are imposed by a federal mandate, i.e., the federal government. Article XIII B, section 9, subdivision (b) of the California Constitution, defines federally mandated appropriations as those "required to comply with mandates of the courts or the federal government which, *without discretion,* [***11] require an expenditure for additional services or which *unavoidably make the provision of existing services more costly.*" [2] (Italics added.)

> 2 "In 1980, after the adoption of article XIII B, [the Legislature] amended the statutory definition of 'costs mandated by the federal government' to provide that these include 'costs resulting from enactment of a state law or regulation where failure to enact such law or regulation to meet specific federal program or service requirements would result in *substantial monetary penalties* or *loss of funds* to *public or private persons* in the state. ...' (Rev. & Tax. Code, § 2206, italics added; Stats. 1980, ch. 1256, § 3, p. 4247.)" (*City of Sacramento v. State of California* (1990) 50 Cal.3d 51, 75 [266 Cal. Rptr. 139, 785 P.2d 522].)

There is no precise formula or rule for determining whether the "costs" are the product of a federal mandate. Our Supreme Court explained: "Given the variety of cooperative federal-state-local programs, we here attempt no final test for 'mandatory' versus 'optional' compliance with federal law. A determination in each case must depend on such factors as the nature and purpose of the federal program; whether its design suggests an intent to coerce; when state and/or local participation began; the penalties, if any, assessed for withdrawal or refusal to participate or comply; and any other legal and practical consequences of nonparticipation, noncompliance, or withdrawal. Always, the courts and the Commission must respect the governing principle of article XIII B, section 9(b): neither state nor local agencies may escape their spending limits when their participation in federal programs is truly voluntary." (*City of Sacramento v. State of California, supra,* 50 Cal.3d at p. 76.)

[***12] 2. *Existence of State Mandate Matter for the Commission*

[HN4](2) Whether a particular cost incurred by a local government arises from carrying out a state mandate for which subvention is required under article XIII B, section 6, is a matter for the Commission to determine in the first instance. [*908]

A local government initiates the process for subvention under article XIII B, section 6 by filing a claim with the Commission. (Gov. Code, § 17521; [**768] cf. *County of San Diego v. State of California* (1997) 15 Cal.4th 68, 89 [61 Cal. Rptr. 2d 134, 931 P.2d 312] [futility exception to exhaustion of administrative remedies doctrine applicable to failure to file claim before Commission].) The initial claim is referred to as a "test claim." (Gov. Code, § 17521.)

"The Legislature enacted Government Code sections 17500 through 17630 to implement article XIII B, section 6. (Gov. Code, § 17500.)" (*County of Fresno v. State of California, supra,* 53 Cal. 3d at p. 484.) The provisions of Government Code section 17500 et seq. "provide the sole and exclusive [***13] procedure by which a local agency ... may claim reimbursement for costs mandated by the state as required by" article XIII B, section 6. (Gov. Code, § 17552.)

[HN5]"It created a 'quasi-judicial body' (*ibid.*) called the Commission on State Mandates ... ([Gov. Code], § 17525) to 'hear and decide upon [any] claim' by a local government that the local government 'is entitled to be reimbursed by the state for costs' as required by article XIII B, section 6. (Gov. Code, § 17551, subd. (a).) It defined 'costs' as 'costs mandated by the state'--'any increased costs' that the local government 'is required to incur ... as a result of any statute ... , or any executive order implementing any statute ... , which mandates a new program or higher level of service of any existing program' within the meaning of article XIII B, section 6. (Gov. Code, § 17514.) Finally, in section 17556(d) it declared that 'The commission shall not find costs mandated by the state ... if, after a hearing, the commission finds that' the local government 'has the authority to levy service charges, fees, [***14] or assessments sufficient to pay for the mandated program or increased level of service.' " (*County of Fresno v. State of California, supra,* 53 Cal. 3d at p. 484.)

3. *Regional Water Board Order Not "Executive Order"*

Section 17516(c) defines, in pertinent part, an " '[e]xecutive order' [as] any order, plan, requirement, rule, or regulation issued by ... [¶] ... [¶] ... [a]ny agency ... of state government, " except an " '[e]xecutive order' does not include any order, plan, requirement, rule, or regulation issued by the State Water ... Board or by any regional water ... board pursuant to Division 7 (commencing with Section 13000) of the Water Code." [3] (Added by Stats. 1984, ch. 1459, § 1, p. 5113.)

> 3 Section 17516(c) further provides: "It is the intent of the Legislature that the State Water ... Board and regional water ... boards will not adopt enforcement orders against publicly owned dis-

> chargers which mandate major waste water treatment facility construction costs unless federal financial assistance and state financial assistance pursuant to the Clean Water Bond Act of 1970 and 1974, is simultaneously made available. 'Major' means either a new treatment facility or an addition to an existing facility, the cost of which is in excess of 20 percent of the cost of replacing the facility."
>
> LA Regional Water Board argues the trial court's ruling sustaining its demurrer to the fourth cause of action for a writ of mandate directing it to delete the subject two obligations under the permit as violative of Government Code section 17516 should be upheld, because section 17516 "applies to construction of major waste treatment facilities, not trash receptacles or inspections." This analysis, however, is inconsistent with the plain language of section 17516 in its entirety.

[*909]

[***15] In light of the above definition, the subject permit issued by an order of the LA Regional Water Board cannot constitute an "executive order implementing any statute, ... which mandates a new program or higher level of service of an existing program within the meaning of" the article XIII B, section 6 [**769] requirement of subvention of funds to local governments for carrying out a state mandate. (Gov. Code, § 17514.)

4. *Procedural Posture*

LA Regional Water Board issued order No. 01-182, which adopted NPDES permit No. CAS004001 (Permit). This Permit imposed two obligations on County/Cities for the purpose of regulating municipal stormwater and urban runoff discharges in Los Angeles County. The first required County/Cities to inspect industrial, commercial, and construction sites to ensure compliance with the law, and the other required County/Cities to install and maintain trash receptacles at transit stops.

County/Cities filed four test claims, i.e., test claims 03-TC-04, 03-TC-19, 03-TC-20, and 03-TC-21, seeking reimbursement of costs for carrying out these obligations. The executive director rejected these test claims as excluded from subvention [***16] pursuant to Section 17516(c).

In the administrative appeals, the Commission found it was bound by Section 17516(c), upheld its executive director's decision, and denied the appeals.

In their amended and consolidated petitions and complaints, County/Cities sought, among other things: (1) An order requiring the State to reimburse them for the new programs or higher level of service under the Permit or, alternatively, to allow them to offset payment of permit and other fees or moneys owed or to be transferred to the state against their costs; (2) an order enjoining state from refusing to reimburse them in the future; or, alternatively, (3) a peremptory writ of mandate directing the Commission to accept their test claims and find they are entitled to reimbursement; (4) a declaration that Government Code section 17516 is unconstitutional; (5) a peremptory writ of mandate directing LA Regional Water Board either to delete or not [*910] enforce the subject obligations under the Permit; and (6) a stay of the challenged portions of the permit.

The Commission and County/Cities filed cross-motions for judgment on the pleadings. The trial court granted the Commission's motion as to the second cause of action for declaratory [***17] relief. The court explained: "The only actual controversy between [County/Cities] and [Commission] is whether [County/Cities]' claims should be deemed reimbursable. The sole and exclusive procedure by which to adjudicate this controversy is a mandate action under Code of Civil Procedure section 1094.5. ([Government Code s]ections 17552, 17559.) The only pertinent relief under ... section 1094.5 is a finding that [the Commission] 'has not proceeded in the manner required by law.' Declaratory relief is not available."

After construing the motion addressed to the third cause of action as a motion to strike improper requested relief, the court granted the motion and struck that part of the third cause of action requesting an order directing the Commission to find their claims to be reimbursable on the ground "[t]he court has no power at this time to do so. [Citations.]"

Turning to County/Cities' motion for judgment on the pleadings, the trial court granted the motion as to the third cause of action for extraordinary writ relief, except as to the stricken request for improper relief. [4]

> 4 In the third cause of action, County/Cities sought a writ of mandate (Code Civ. Proc., § 1094.5) compelling a court finding that Government Code section 17516 was unconstitutional on its face or as applied in this action and directing the Commission to accept their test claims for filing and approving them for reimbursement.

[***18] The court found that to the extent Section 17516(c) excepted the orders of Regional [**770] The Water Boards from the definition of "executive orders," Section 17516(c) was unconstitutional in that it expressly contravened article XIII B, section 6. The court ordered the Commission to set aside its order affirming its executive director's rejections of the four test claims and to consider these claims on the merits.

In granting in part County/Cities' petitions for a writ of mandate, the trial court found the Commission, "though it proceeded as required by statutory law, as it was constrained to do, has not proceeded as required by superior constitutional law. (Code Civ. Proc., [§]1094.5, subd. (a).) The question whether [County/Cities] state valid claims for reimbursement must be remanded to [C]ommission, which is ordered to consider [these] claims on their merits. [Citations.]" [*911]

A peremptory writ of mandate was issued on May 24, 2005. Judgment was entered the same date. This appeal and cross-appeal followed.

STANDARD OF REVIEW

"The standard for reviewing a judgment on the pleadings is settled: [HN6]'A motion for judgment on the pleadings is the equivalent [***19] of a general demurrer but is made after the time for demurrer has expired. The rules governing demurrers apply. [Citation.] The grounds for a motion for judgment on the pleadings must appear on the face of the challenged complaint or be based on facts which the court may judicially notice. [Citations.] On review we must determine if the complaint states a cause of action as a matter of law.' [Citation.] 'We review the complaint de novo to determine whether [it] alleges facts sufficient to state a cause of action under any legal theory. [Citation.]' [Citation.]" (*McCormick v. Travelers Ins. Co.* (2001) 86 Cal.App.4th 404, 408 [103 Cal. Rptr. 2d 258].)

[HN7]"In reviewing the trial court's ruling on a writ of mandate, the appellate court is ordinarily confined to an inquiry as to whether the findings and judgment of the trial court are supported by substantial evidence. (*Evans v. Unemployment Ins. Appeals Bd.* (1985) 39 Cal.3d 398, 407 [216 Cal. Rptr. 782, 703 P.2d 122].) However, where the facts are undisputed and the issues present questions of law, the appellate court is not bound by the trial court's decision but may make its own determination. (*Ibid.*)" (*Connell v. Superior Court* (1997) 59 Cal.App.4th 382, 394 [69 Cal. Rptr. 2d 231].)

[***20] DISCUSSION

1. *Defense of Statute of Limitations Forfeited*

On appeal for the first time, the Commission asserts the challenge of County/Cities to the constitutionality of Section 17156(c) is barred by the 90-day limitation period of section 341.5 of the Code of Civil Procedure, which governs the timeliness of actions challenging the constitutionality of state funding for municipalities, school districts, special districts, and local agencies.

Code of Civil Procedure section 341.5 provides: [HN8]"Notwithstanding any other provision of law, any action or proceeding in which a county, city, city and county, school district, special district, or any other local agency is a plaintiff or petitioner, that is brought against the State of California challenging the constitutionality of any statute relating to state funding for counties, cities, cities and counties, school districts, special districts, or other local agencies, shall be commenced within 90 days of the effective date of the [*912] statute at issue in the action. For purposes of this section, 'State of California' means the State of California itself, or any of its agencies, [***21] departments, commissions, boards, or public officials." (Added by [**771] Stats. 1994, ch. 155, § 1, p. 1601, eff. July 11, 1994; amended by Stats. 1994, ch. 156, § 1, p. 1619, eff. July 11, 1994.)

The Commission argues the constitutional challenge to Section 17516(c) is time-barred, because: "Government Code section 17500 et seq., including section 17516, relates to state funding for counties and cities relative to state-mandated local programs. ... [S]ection 17516 was enacted in 1984 and became effective January 1, 1985. The petition in this case challenging section 17516 as unconstitutional was filed April 28, 2004," which was more than 90 days after the effective date of section 17516.

[HN9](3) The time bar of a statute of limitations may be raised by demurrer "[w]here the complaint discloses on its face that the statute of limitations has run on the causes of action stated in the complaint, [for the reason that] it fails to state facts sufficient to constitute a cause of action. [Citation.]" (*ABF Capital Corp. v. Berglass* (2005) 130 Cal.App.4th 825, 833 [30 Cal. Rptr. 3d 588].) Forfeiture of a time-bar defense transpires by the failure to raise [***22] the applicable statute of limitations in the answer. (See, e.g., *Minton v. Cavaney* (1961) 56 Cal.2d 576, 581 [15 Cal. Rptr. 641, 364 P.2d 473]; *Davies v. Krasna* (1975) 14 Cal.3d 502, 508 [121 Cal. Rptr. 705, 535 P.2d 1161]; *Mitchell v. County Sanitation Dist.* (1957) 150 Cal. App. 2d 366, 371 [309 P.2d 930]; see also Code Civ. Proc., § 458.)

As the Commission concedes, it did not raise "[Code of Civil Procedure] section 341.5 as an affirmative defense in its pleadings in the trial court." This omission signifies that the Commission therefore has forfeited any right it may have had to assert section 341.5 to bar, as untimely, the claims of County/Cities to the constitutionality of Section 17516(c).

(4) For a contrary conclusion, the Commission argues "the statute of limitations to challenge an administrative action is jurisdictional and should not be considered waived. (*United Farm Workers of America v. Agricultural Labor Relations Board* (1977) 74 Cal. App. 3d 347, 350 [141 Cal. Rptr. 437]; *Tielsch v. City of Anaheim* (1984) 160 Cal. App. 3d 576, 578 [206 Cal. Rptr.

740]; [***23] *Donnellan v. City of Novato* (2001) 86 Cal.App.4th 1097, 1103 [103 Cal. Rptr. 2d 882].) [HN10]If a time limit in a mandamus proceeding is held to be jurisdictional, estoppel or waiver cannot extend the time. (*Hollister Convalescent Hosp., Inc. v. Rico* (1975) 15 Cal.3d 660, 666, 674 [125 Cal. Rptr. 757, 542 P.2d 1349].)" [*913]

The Commission's fallback position is that this court should exercise its discretion to determine the applicability of the time bar, because this "issue is a question of law rather than of fact" and "[t]his matter affects the public interest since [County/Cities] are seeking reimbursement from the state for costs incurred to comply with a permit" issued by the LA Regional Water Board. In other words, "taxpayers statewide could unjustly suffer the consequences of funding a local program if Code of Civil Procedure section 341.5 is not considered and ... section 17516 is held to be unconstitutional." As authority, the Commission relies primarily on *City of Sacramento v. State of California, supra*, 50 Cal.3d at pages 64-65 (where issue of law rather than fact raised, public interest exception governs over [***24] collateral estoppel bar) and *Connell v. Superior Court, supra*, 59 Cal.App.4th at pages 387-388, 396-397 (public interest exception applicable to allow review of question of law as to whether recycled wastewater regulation constituted reimbursable state mandate.)

(5) Neither of the Commission's positions is successful. In the first instance, [HN11]the time [**772] bar of section 341.5 of the Code of Civil Procedure applies to a challenge to the constitutionality of any statute relating to state funding for counties and other local governmental entities, *not* to a challenge to an action by an administrative agency. As for the second, [HN12]neither *City of Sacramento* nor *Connell* stands for the proposition that the bar of the applicable statute of limitations may be raised for the first time on appeal.

Additionally, the Commission's characterization of the public interest to be served is a non sequitur. If Government Code section 17516 were in fact unconstitutional, it does not follow that "taxpayers statewide could *unjustly* suffer the consequences of funding a local program." (Italics added.) How could such funding result in injustice when any requirement of [***25] reimbursement to local governments would be under the constitutional compulsion of article XIII B, section 6

2. Existence of Federal or State Mandate Issue for the Commission

It is undisputed that a federal mandate is not subject to the subvention requirement of article XIII B, section 6 for a state mandate. Accordingly, if the Permit, including the subject two obligations thereunder, constitutes a federal mandate, the constitutionality of Section 17516(c) is not implicated, and thus, no issue as to its constitutionality is before this court to address on the merits. (See *People ex rel. Lynch v. Superior Court* (1970) 1 Cal.3d 910, 912 [83 Cal. Rptr. 670, 464 P.2d 126] ["The rendering of advisory opinions falls within neither the functions nor the jurisdiction of this court."].) [*914]

In its amicus curiae brief, LA Regional Water Board takes the position that, as a matter of law, Section 17516(c) is consistent with article XIII B, section 6 (and thus not unconstitutional) "to the extent Division 7, Chapter 5.5 (commencing with Water Code section 13370)" simply implements federal mandates under the Clean Water Act (33 U.S.C. § 1342(b)). [***26] The water boards, i.e., the State Water Board and its Regional Water Boards, implement the federal permit program under chapter 5.5, which the California Legislature enacted to bypass administration of such program directly by the federal Environmental Protection Agency.

LA Regional Water Board takes the further position that the federal mandate nature of its NPDES permits remains constant although it exercises discretion to control the discharge of pollutants through municipal stormwater programs not appearing in federal regulations. Specifically, LA Regional Water Board argues: "When a state [Regional Water Board] issues an NPDES permit requiring municipalities to inspect facilities as a means of controlling their discharge of pollutants, this is not shifting state responsibilities onto local agencies[, because f]ederal law imposes inspection requirements upon municipal permittees."

As for the trash receptacle obligation, LA Regional Water Board points out the Clean Water Act allows the use of programs to control discharge of pollutants in connection with a municipal stormwater permit and argues one such program under the Permit is the ability of "municipalities to employ 'Best [***27] Management Practices' (BMPs) to ... attain water quality standards." It identifies "[t]he Permit's trash receptacle requirement as one such [BMP]."

It further argues that the trash receptacle obligation cannot be deemed a state-mandated program, because it is not "an absolute requirement. Any permittee may petition the Regional Water Board to substitute another equally effective BMP for one included within the Permit.[] [For instance, i]f a permittee demonstrates that [**773] a pre-existing program or level of service will be equally effective in controlling pollution, it may seek to substitute that program."

We are not convinced that the obligations imposed by a permit issued by a Regional Water Board necessarily constitute federal mandates under all circumstances.

As explained, *ante*, the existence of a federal, as contrasted with a state, mandate is not easily ascertainable.

By letter, we invited the parties and LA Regional Water Board to address whether an obligation under an NPDES permit by a Regional Water Board can qualify as a state mandate within the meaning of article XIII B, section 6, assuming an NPDES permit itself qualified as a federal mandate, and if so, [*915] why each [***28] of the subject two obligations does or does not constitute a state mandate. We have received their responses.

a. *NPDES Permits Issued by Regional Water Boards*

"California cases have repeatedly explained the complicated web of federal and state laws and regulations concerning water pollution, especially storm sewer discharge into the public waterways. (*City of Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4th 613, 619-621 [26 Cal. Rptr. 3d 304, 108 P.3d 862] (*Burbank*); *Building Industry Assn. of San Diego County v. State Water Resources Control Board* (2004) 124 Cal.App.4th 866, 872-875 [22 Cal. Rptr. 3d 128] ... ; *Communities for a Better Environment v. State Water Resources Control Bd.* (2003) 109 Cal.App.4th 1089, 1092-1094 [1 Cal. Rptr. 3d 76] ... ; *WaterKeepers Northern California v. State Water Resources Control Bd.* (2002) 102 Cal.App.4th 1448, 1451-1453 [126 Cal. Rptr. 2d 389].)

(6) "For purposes of this case, the important point is described by the California Supreme Court in *Burbank*: [HN13]'Part of the Federal Clean Water Act [33 U.S.C. § 1251 et seq.] is the National Pollutant Discharge Elimination System (NPDES), "[t]he primary means" for enforcing effluent limitations [***29] and standards under the Clean Water Act. (*Arkansas v. Oklahoma* [(1992) 503 U.S. 91, 101 [117 L. Ed. 2d 239, 112 S. Ct. 1046]].) The NPDES sets out the conditions under which the federal [Enviromental Protection Agency] or a state with an approved water quality control program can issue permits for the discharge of pollutants in wastewater. (33 U.S.C. § 1342(a) & (b).) In California, wastewater discharge requirements established by the regional [water] boards are the equivalent of the NPDES permits required by federal law. (§ 13374.)' (*Burbank, supra*, 35 Cal.4th at p. 621.)

"California's Porter-Cologne Act (Wat. Code, § 13000 et seq.) establishes a statewide program for water quality control. Nine regional [water] boards, overseen by the State [Water] Board, administer the program in their respective regions. (Wat. Code, §§ 13140, 13200 et seq., 13240, and 13301.) Water Code sections 13374 and 13377 authorize the Regional [Water] Board to issue federal NPDES permits for five-year periods. (33 U.S.C. § 1342, subd. (b)(1)(B).)" [***30] [5] [**774] (*City of Rancho Cucamonga v. Regional Water Quality* [*916] *Control Bd.* (2006) 135 Cal.App.4th 1377, 1380-1381 [38 Cal. Rptr. 3d 450].) In a related case, Division Five of this district upheld the authority of LA Regional Water Board to issue the Permit here. (*County of Los Angeles v. State Water Resources Control Board* (2006) 143 Cal.App.4th 985, 999-1000 [50 Cal. Rptr. 3d 619], review den. [holding the nine Regional Water Boards authorized under state law to issue NPDES permits].)

5 In pertinent part, article XIII B, section 6, provides: "[T]he Legislature may, but need not, provide a subvention of funds for the following mandates: [¶] ... [¶] (3) Legislative mandates enacted prior to January 1, 1975, or executive orders ... initially implementing legislation enacted prior to January 1, 1975." (Art. XIII B, § 6, subd. (a)(3).) LA Regional Water Board argues that subvention under article XIII B, section 6, is not required as to the Permit, because it is an executive order implementing the Porter-Cologne Water Quality Control Act (Wat. Code, § 13020 et seq.), which is legislation enacted in 1969. This argument fails for the reason that the executive order resulting in the 2001 Permit was not one "*initially*" implementing such pre-1975 legislation. Equally unsuccessful is LA Regional Water Board's apparent argument that Section 17516(c) should be deemed constitutional for the reason that "most of" the Porter-Cologne Act (div. 7) was enacted prior to 1975. The fatal fallacy of this position is that the exclusion of Section 17516(c) applies to all orders issued pursuant to division 7 *regardless* of the date the statute in question was enacted.

[***31] b. *Potential Federal and State Components of NPDES Permit*

As expected, LA Regional Water Board contends that as in the case of NPDES "permits as a whole, the individual conditions of an NPDES permit are federally required to meet the mandates of the Clean Water Act." It argues: "The Permit is federally required. The conditions within it are federally required to implement the Clean Water Act's mandates. The two cannot be separated into a 'federal' permit with 'state' conditions. [Citation.]"

County/Cities respond, contrariwise, that "[a]n NPDES permit can contain both federal and nonfederal requirements." As case authority, they rely primarily on *City of Burbank v. State Water Resources Control Bd., supra*, 35 Cal.4th 613. Our Supreme Court concluded that under the supremacy clause of the federal Constitution, a Regional Water Board must comply with the fed-

eral Clean Water Act in issuing an NPDES permit. (35 Cal. 4th at pp. 626-627.) Nonetheless, "[u]nder the federal Clean Water Act, each state is free to enforce its own water quality laws so long as its effluent limitations are not 'less stringent' than those set out in the Clean Water Act. [Citation.]" (*Id.* at p. 620.) [***32] The court thus acknowledged in *Burbank* that an NPDES permit may contain terms federally mandated and terms exceeding federal law. (See also *Burbank, supra*, at pp. 618, 628.) County/Cities also point out that the potential for non-federally mandated components of an NPDES permit is acknowledged under both federal law [6] and state law. [7]

> 6 In this regard, they rely on this federal statute: "Except as expressly provided in this Act [33 USCS §§ 1251 et seq.], nothing in this Act [33 USCS §§ 1251 et seq.] shall (1) preclude or deny the right of any State or political subdivision thereof or interstate agency to adopt or enforce (A) any standard or limitation respecting discharges of pollutants, or (B) any requirement respecting control or abatement of pollution; except that if an effluent limitation, or other limitation ... is in effect under this Act [33 USCS §§ 1251 et seq.], such State[, etc.] ... may not adopt or enforce any effluent limitation or other limitation ... which is less stringent than the effluent limitation, or other limitation ... ." (33 U.S.C.S. § 1370.)

[***33]

> 7 On this point, they rely on this statutory provision: "Notwithstanding any other provision of this division, the state board or the regional boards shall, as required or authorized by the Federal Water Pollution Control Act, as amended, issue waste discharge requirements ... which apply and ensure compliance with all applicable provisions of the act and acts amendatory thereof or supplementary, thereto, together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance." (Wat. Code, § 13377.)

[*917]

[**775] Additionally, County/Cities argue "that an obligation imposed on a municipality arises as a result of a federal law or program does not, in and of itself, render that obligation a federal mandate." Rather, they assert that to qualify as a federal mandate, "federal law itself must impose the obligation upon the municipality." They point out Government Code section 17556 provides that costs flowing from a federal mandate may be subject [***34] to subvention if such costs exceed such mandate. [8] They also cite two cases in support of their position.

> 8 Government Code section 17556, subdivision (c), provides: [HN14]"The commission shall not find costs mandated by the state, as defined in Section 17514, in any claim submitted by a local agency or school district, if, after a hearing, the commission finds ... [¶] ... [¶] [t]he statute or executive order imposes a requirement that is mandated by a federal law or regulation and results in costs mandated by the federal government, unless the statute or executive order mandates costs that exceed the mandate in that federal law or regulation."

In *San Diego Unified School Dist. v. Commission on State Mandates* (2004) 33 Cal.4th 859 [16 Cal. Rptr. 3d 466, 94 P.3d 589], our Supreme Court concluded the costs incurred by school districts in holding mandatory expulsion hearings under Education Code section 48915 were state mandates subject to subvention under article XIII B, section 6. [***35] The court explained that expulsion was mandated under the Education Code, rather than federal law, and thus, the fact the costs were incurred to comport with federal due process, a federal mandate, was not controlling. (*San Diego Unified School Dist. v. Commission on State Mandates, supra*, at pp. 880-882.)

In the other case, *Hayes v. Commission on State Mandates, supra*, 11 Cal.App.4th 1564, the appellate court concluded that the finding a mandate was federal turned on whether "the state freely chose to impose the costs upon the local agency as a means of implementing a federal program" and that under these circumstances, "the costs are the result of a reimbursable state mandate regardless whether the costs were imposed upon the state by the federal government." (*Id.* at p. 1594.)

c. *Existence of State Mandates Matter for the Commission*

A review of the pleadings and the matters that may be judicially noticed (Evid. Code, §§ 451, 452, 459) leads to the inescapable conclusion that whether the two obligations in question constitute federal or state mandates [***36] presents factual issues which must be addressed in the first instance by the [*918] Commission if Section 17516(c) were found to be unconstitutional. Resolution of the federal or state nature of these obligations therefore is premature and, thus, not properly before this court.

In its response, the Commission argues that if this court determines Section 17516(c) is unconstitutional, the subject test claims "should be remanded to ... Com-

mission to 'decide in the first instance whether a local agency is entitled to reimbursement under [article XIII B,] section 6[.]' (*Lucia Mar Unified School District v. Honig*[, *supra*,] 44 Cal.3d 830, 837; Gov. Code, § 17552.)"

The Commission stated that on such remand, it would apply the following cases in determining whether state mandates exist: *City of Sacramento v. State of California, supra*, 50 Cal.3d 51, which sets forth various factors and criteria for determining whether the federal program imposes a mandate on the state; *Hayes v. Commission on State Mandates, supra*, 11 Cal.App.4th 1564, [**776] which it contends "provides guidance on whether the state, [***37] in turn, has mandated a federal program on the local governments"; *Long Beach Unified Sch. Dist. v. State of California, supra*, 225 Cal. App. 3d 155, which analyzes whether the state-mandated activities exceed federal requirements; and *San Diego Unified School Dist. v. Commission on State Mandates, supra*, 33 Cal.4th 859, which also provides guidance on this same issue.

3. *"Executive Order" Under Revenue and Taxation Code Not Probative*

The Commission contends the exclusion of orders of the Regional Water Boards from the definition of "executive order" in Section 17516(c) does not contravene article XIII B, section 6, because Government Code section 17516 derives from the definition of "executive order" in Revenue and Taxation Code section 2209, [9] of which the voters were presumed to have known to exist [*919] when they adopted Proposition 4 (i.e., art. XIII B, § 6) in 1979, and thus, Proposition 4 intended to endorse and continue such exclusion from the definition of "executive order" which was later carried over to Section 17516(c). We disagree.

> 9 Revenue and Taxation Code section 2209(c) provides: [HN15]" 'Executive order' means any order, plan, requirement, rule or regulation issued ... [¶] ... [¶] ... [b]y any agency ... of state government; provided that the term 'executive order' shall not include any order ... issued by the State Water ... Board or by any regional water ... board pursuant to Division 7 (commencing with Section 13000) of the Water Code.
>
> "It is the intent of the Legislature that the State Water ... Board and regional water ... boards will not adopt enforcement orders against publicly owned discharges which mandate major waste water treatment facility construction costs unless federal financial assistance and state financial assistance pursuant to the Clean Water Bond Act of 1970 and 1974, is simultaneously made available.
>
> " 'Major' means either a new treatment facility or an addition to an existing facility, the cost of which is in excess of 20 percent of the cost of replacing the facility." (Rev. and Tax. Code, § 2209(c), added by Stats. 1974, ch. 457, § 2, p. 1079, and amended by Stats. 1975, ch. 486, § 2, p. 998, eff. Sept. 2, 1975.)

[***38] We further disagree with the Commission's reliance on a presumption that when the voters adopted Proposition 1A in November 2004, they knew of, and thus, necessarily approved of Section 17516(c)'s exclusion of orders of Regional Water Boards from the definition of "executive order."

(7) Our focus, instead, must be on the import of article XIII B, section 6, not on the preconstitutional scheme for subvention of funds to local agencies of which section 2209 of the Revenue and Taxation Code was part. As our Supreme Court instructs: [HN16]"In construing the meaning of the constitutional provision [i.e., article XIII B, section 6], our inquiry is not focussed on what the Legislature intended in adopting the former statutory reimbursement scheme, but rather on what the voters meant when they adopted article XIII B in 1979. To determine this intent, we must look to the language of the provision itself. [Citation.]" (*County of Los Angeles v. California, supra*, 43 Cal.3d at p. 56.)

[HN17]**(8)** The subvention requirement of article XIII B, section 6 applies "[w]henever the Legislature or any state agency mandates a new program or higher level of service ... ." The all-encompassing [***39] "any state agency" language defeats any perceived presumption that the electorate intended to incorporate into article XIII B, section 6 the exclusion of a particular state agency, e.g., the Regional Water Board, from its subvention requirement.

[**777] 4. *Section 17516(c) Unconstitutional as to Regional Water Boards*

LA Regional Water Board argues in its amicus curiae brief that Section 17516(c) is constitutional for the additional reason that its exemption from the subvention requirement of article XIII B, section 6, is "appropriate because the Water Boards regulate water pollution with an even hand. Whether the pollution originates from a local public agency or a private industrial source, the Water Boards must assure their permits protect water quality consistent with state and federal law."

This argument is not persuasive. Whether the permit in question issued by Regional Water Boards governs both public and private pollution dischargers to the same extent presents factual issues not yet resolved. In any event, the applicability of permits to public and private dischargers does not inform us about whether a particular

permit or an obligation thereunder imposed on local governments constitutes [***40] a state mandate necessitating subvention under article XIII B, section 6. (See *Carmel Valley Fire Protection Dist. v. State of California* (1987) 190 Cal. App. 3d 521, 530-531, 534, 537, 541 [234 Cal. Rptr. 795] [executive orders for protective fire clothing and equipment state mandated even if record, which was incomplete, revealed private sector firefighters also subject to the executive orders].)

(9) In contrast, [HN18]the constitutional infirmity of Section 17516(c) is readily apparent from its plain language that the definition of " '[e]xecutive order' does not include *any* order, plan, requirement, rule, or regulation *issued by the State Water ... Board or by any regional water ... board* pursuant to Division 7 (commencing with Section 13000) of the Water Code." (§ 17516(c), italics added.) This exclusion of any order issued by any Regional Water Board contravenes the clear, unequivocal intent of article XIII B, section 6 that subvention of funds is required "[w]henever ... *any state agency* mandates a new program or higher level of service on any local government ... ." [10] (Italics added.) We therefore conclude that Section 17516(c) [***41] is unconstitutional to the extent it excludes "any order ... issued by ... any regional water ... board pursuant to Division 7 (commencing with Section 13000) of the Water Code" from the definition of " '[e]xecutive order.' " (Art. XIII B, §6.)

> 10 At oral argument, when asked to identify the public policy or other reason that would be served by exempting Regional Water Boards from the constitutional subvention requirement, counsel for LA Regional Water Board responded exemption is warranted, because water is an important concern. No one can quarrel with the fact water plays an important role in California. Nonetheless, this reason does not compel the conclusion that an exemption should be carved out for Regional Water Boards as contrasted with those state agencies which regulate other important state interests.

This conclusion leads to the further conclusion that whether one or both of the subject two obligations constitutes a state mandate necessitating subvention of funds under [***42] article XIII B, section 6 is an issue that must in the first instance be resolved by the Commission. Accordingly, we uphold the trial court's issuance of a writ of mandate directing the Commission to vacate its decisions affirming its executive director's rejection of the four test claims and to consider these claims on the merits.

5. *Cross-appeal Moot*

County/Cities filed a protective cross-appeal from the judgment to the extent the trial court dismissed the portions of their writ of mandate petitions against LA Regional Water Board. [11] The threshold [**778] issue raised is whether County/Cities are entitled to proceed directly in superior court against LA [*921] Regional Water Board for reimbursement relief if they are statutorily precluded from obtaining a hearing before the Commission.

> 11 The trial court sustained the demurrer to the fourth cause of action for a writ of mandate directing LA Regional Water Board to delete or not enforce the inspection and trash receptacle obligations. The court granted its own motion for judgment on the pleadings without leave to amend as to LA Regional Water Board on the first cause of action for a writ of mandate directing reimbursement; the second cause of action for declaratory relief; and the fifth cause of action for a writ of mandate directing LA Regional Water Board to delete or not enforce the subject obligations.

[***43] County/Cities' position is they are entitled to a hearing on the merits of their claims before either the Commission or LA Regional Water Board. If this court determines the Commission's jurisdiction is exclusive, the Commission must afford them a hearing and determine the merits of their subvention claim under article XIII B, section 6. If not exclusive, County/Cities must be allowed to seek relief directly against Regional Water Board before the superior court.

LA Regional Water Board argues County/Cities have no right to seek subvention relief from a Regional Water Board, because reimbursement of costs mandated by the state must be pursued through the statutory subvention scheme, which is "the sole and exclusive procedure by which a local agency ... may claim reimbursement for costs mandated by the state as required by Section 6 of Article XIII B ... ." (Gov. Code, § 17552.) Their claims thus must be addressed exclusively to the Commission in first instance.

The cross-appeal against LA Regional Water Board is moot in light of our above conclusion that the Commission is to hear and determine the merits of the County/Cities' test claims. We therefore do [***44] not reach the merits of the issues raised in the cross-appeal.

CONCLUSION

(10) Section 17516(c) is unconstitutional to the extent it purports to exempt orders issued by Regional Water Boards from the definition of "executive orders" for which subvention of funds to local governments for car-

rying out state mandates is required pursuant to article XIII B, section 6. The trial court therefore properly issued a writ of mandate directing the Commission to resolve the four test claims on the merits without reference to Section 17516(c). In light of this conclusion, we need not, and therefore do not, address the issues raised on the now moot cross-appeal. [*922]

DISPOSITION

The judgment is affirmed. Each party shall bear its own costs on appeal and cross-appeal.

Klein, P. J., and Croskey, J., concurred.

TAB "12"

LEXSEE

Caution
As of: Jun 23, 2010

COUNTY OF LOS ANGELES et al., Plaintiffs and Appellants, v. THE STATE OF CALIFORNIA et al., Defendants and Respondents. CITY OF SONOMA et al., Plaintiffs and Appellants, v. THE STATE OF CALIFORNIA et al., Defendants and Respondents

L.A. No. 32106

Supreme Court of California

43 Cal. 3d 46; 729 P.2d 202; 233 Cal. Rptr. 38; 1987 Cal. LEXIS 273

January 2, 1987

SUBSEQUENT HISTORY: Appellants' petition for a rehearing was denied February 26, 1987.

PRIOR HISTORY: Superior Court of Los Angeles County, Nos. C 424301 and C 464829, Leon Savitch and John L. Cole, Judges. The Court of Appeal, Second Dist., Div. Five, affirmed the first action; the second action was reversed and remanded to the State Board of Control for further and adequate findings (B001713 and B003561).

DISPOSITION: The judgment of the Court of Appeal is reversed. Each side shall bear its own costs.

CASE SUMMARY:

PROCEDURAL POSTURE: Appellant county and city sought review of a decision of the Court of Appeals, Third Appellate District, Second Division (California), which held that state-mandated increases in workers' compensation benefits, that do not exceed the rise in the cost of living, were not costs which must be borne by respondent state under Cal. Const. art. XIII B, and its legislative implementing statutes.

OVERVIEW: Proceedings were initiated to determine whether legislation, which increased certain workers' compensation benefit payments, was subject to the command of Cal. Const. art. XIII B that local government costs mandated by respondent state must be funded by respondent. Appellant county and city sought review of the appellate court decision which held that state-mandated increases in workers' compensation benefits, that did not exceed the rise in the cost of living, were not costs which must be borne by respondent under Cal. Const. art. XIII B. On appeal, the court agreed that the State Board of Control properly denied appellants' claims but the court's conclusion rested on entirely new grounds. Thus, the judgment was reversed on a finding that appellants' petitions for writs of mandate to compel approval of appellants' claims lacked merit and should have been denied outright. The court concluded that Cal. Const. art. XIII B, § 6 had no application to, and respondent need not provide subvention for, the costs incurred by local agencies in providing to their employees the same increase in workers' compensation benefits that employees of private individuals or organizations received.

OUTCOME: The judgment of the court of appeal was reversed in favor of respondent state. The court concluded that appellant county and city's reimbursement claims were both properly denied by the California State Board of Control. Their petitions for writs of mandate seeking to compel the board to approve the claims lacked merit and should have been denied by the superior court without the necessity of further proceedings before the board.

CORE TERMS: local agencies, reimbursement, workers' compensation, local governments, increased level of service, subvention, repeal, appropriation, compensation benefits, mandated, levels of service, pro tanto, electorate, new programs, constitutional provision, plenary

power, state-mandated, reimburse, residents, voters, governmental function, incidental, discipline, repealed, taxation, maximum, entities, existing program, providing services, supermajority

LexisNexis(R) Headnotes

Governments > Local Governments > Finance
Governments > Public Improvements > General Overview
Workers' Compensation & SSDI > Administrative Proceedings > Awards > Enforcement
[HN1]The legislative intent of the Cal. Const. art. XIII B was subvention for the expense or increased cost of programs administered locally and for expenses occasioned by laws that impose unique requirements on local governments and do not apply generally to all state residents or entities. In using the word "programs" the commonly understood meaning of the term was meant, as in programs which carry out the governmental function of providing services to the public.

Governments > Legislation > Expirations, Repeals & Suspensions
[HN2]It is ordinarily to be presumed that the legislature by deleting an express provision of a statute intended a substantial change in the law.

Governments > Legislation > Interpretation
[HN3]In construing the meaning of the constitutional provision, the court's inquiry is not focussed on what the legislature intended in adopting the former statutory reimbursement scheme, but rather on what the voters meant when they adopted Cal. Const. art. XIII B. To determine this intent, the court must look to the language of the provision itself.

Governments > Legislation > Enactment
Governments > Legislation > Types of Statutes
Governments > Local Governments > Elections
[HN4]Although a bill for state subvention for the incidental cost to local governments of general laws may be passed by simple majority vote of each house of the legislature pursuant to Cal. Const. art. IV, § 8(b), the revenue measures necessary to make them effective may not. A bill which will impose costs subject to subvention of local agencies must be accompanied by a revenue measure providing the subvention required by Cal. Const. art. XIII B. Cal. Rev. & Tax. Code § 2255(c). Revenue bills must be passed by two-thirds vote of each house of the legislature. Cal. Const. art. IV, § 12(d).

Governments > State & Territorial Governments > Relations With Governments
Workers' Compensation & SSDI > Administrative Proceedings > Judicial Review > General Overview
Workers' Compensation & SSDI > Benefit Determinations > General Overview
[HN5]In no sense can employers, public or private, be considered to be administrators of a program of workers' compensation or to be providing services incidental to administration of the workers' compensation program. Workers' compensation is administered by the state through the Division of Industrial Accidents and the Workers' Compensation Appeals Board. Cal. Lab. Code § 3201 et seq. Therefore, although the state requires that employers provide workers' compensation for nonexempt categories of employees, increases in the cost of providing this employee benefit are not subject to reimbursement as state-mandated programs or higher levels of service within the meaning of Cal. Const. art. XIII B, § 6.

Governments > Legislation > Interpretation
[HN6]In the absence of irreconcilable conflict among their various parts, constitutional provisions must be harmonized and construed to give effect to all parts.

Governments > Legislation > Effect & Operation > General Overview
Workers' Compensation & SSDI > Coverage > General Overview
[HN7]Cal. Const. art. XIV, § 4 gives the legislature plenary power, unlimited by any provision of the California Constitution, over workers' compensation.

Governments > Legislation > Effect & Operation > General Overview
Workers' Compensation & SSDI > Coverage > General Overview
[HN8]See Cal. Const. art. XIV, § 4.

Governments > Legislation > Expirations, Repeals & Suspensions
[HN9]A pro tanto repeal of conflicting state constitutional provisions removes "insofar as necessary" any restrictions which would prohibit the realization of the objectives of the new article.

SUMMARY:

CALIFORNIA OFFICIAL REPORTS SUMMARY

The trial court denied a petition for writ of mandate to compel the State Board of Control to approve reimbursement claims of local government entities, for costs incurred in providing an increased level of service mandated by the state for workers' compensation benefits. The trial court found that Cal. Cosnt., art. XIII B, § 6, requiring reimbursement when the state mandates a new program or a higher level of service, is subject to an implied exception for the rate of inflation. In another action, the trial court, on similar claims, granted partial relief and ordered the board to set aside its ruling denying the claims. The trial court, in this second action, found that reimbursement was not required if the increases in benefits were only cost of living increases not imposing a higher or increased level of service on an existing program. Thus, the second matter was remanded due to insubstantial evidence and legally inadequate findings. (Superior Court of Los Angeles County, Nos. C 424301 and C 464829, Leon Savitch and John L. Cole, Judges.) The Court of Appeal, Second Dist., Div. Five, Nos. B001713 and B003561 affirmed the first action; the second action was reversed and remanded to the State Board of Control for further and adequate findings.

The Supreme Court reversed the judgment of the Court of Appeal, holding that the petitions lacked merit and should have been denied by the trial court without the necessity of further proceedings before the board. The court held that when the voters adopted art. XIII B, § 6, their intent was not to require that state to provide subvention whenever a newly enacted statute results incidentally in some cost to local agencies, but only to require subvention for the expense or increased cost of programs administered locally, and for expenses occasioned by laws that impose unique requirements on local governments and do not apply generally to all state residents or entities. Thus, the court held, reimbursement was not required by art. XIII B, § 6. Finally, the court held that no pro tanto repeal of Cal. Const., art. XIV, § 4 (workers' compensation), was intended or made necessary by the adoption of art. XIII B, § 6. (Opinion by Grodin, J., with Bird, C. J., Broussard, Reynoso, Lucas and Panelli, JJ., concurring. Separate concurring opinion by Mosk, J.)

HEADNOTES

CALIFORNIA OFFICIAL REPORTS HEADNOTES

Classified to California Digest of Official Reports, 3d Series

(1) State of California § 12--Fiscal Matters--Appropriations--Reimbursement to Local Governments--Costs to Be Reimbursed. --When the voters adopted Cal. Const., art. XIII B, § 6 (reimbursement to local agencies for new programs and services), their intent was not to require the state to provide subvention whenever a newly enacted statute resulted incidentally in some cost to local agencies. Rather, the drafters and the electorate had in mind subvention for the expenses occasioned by laws that impose unique requirements on local governments and do not apply generally to all state residents or entities.

(2) Statutes § 18--Repeal--Effect--"Increased Level of Service." --The statutory definition of the phrase "increased level of service," within the meaning of Rev. Tax. Code, § 2207, subd. (a) (programs resulting in increased costs which local agency is required to incur), did not continue after it was specifically repealed, even though the Legislature, in enacting the statute, explained that the definition was declaratory of existing law. It is ordinarily presumed that the Legislature, by deleting an express provision of a statute, intended a substantial change in the law.

[See Am.Jur.2d, Statutes, § 384.]

(3) Constituional Law § 13--Construction of Constitutions--Language of Enactment. --In construing the meaning of an initiative constitutional provision, a reviewing court's inquiry is focused on what the voters meant when they adopted the provision. To determine this intent, courts must look to the language of the provision itself.

(4) Constitutional Law § 13--Construction of Constitutions--Language of Enactment--"Program" --The word "program," as used in Cal. Const., art. XIII B, § 6 (reimbursement to local agencies for new programs and services), refers to programs that carry out the governmental function of providing services to the public, or laws which, to implement a state policy, impose unique requirements on local governments and do not apply generally to all residents and entities in the state.

(5) State of California § 12--Fiscal Matters--Appropriations--Reimbursement to Local Governments--Increases in Workers' Compensation Benefits. --The provisions of Cal. Const., art. XIII B, § 6 (reimbursement to local agencies for nw programs and services), have no application to, and the state need not provide subvention for, the costs incurred by local agencies in providing to their employees the same increase in workers' compensation benefits that employees of private individuals or organizations receive. Although the state requires that employers provide workers' compensation

for nonexempt categories of employees, increases in the cost of providing this employee benefit are not subject to reimbursement as state-mandated programs or higher levels of service within the meaning of art. XIII B, § 6. Accordingly, the State Board of Control properly denied reimbursement to local governmental entitles for costs incurred in providing state-mandated increases in workers' compensation benefits. (Disapproving *City of Sacramento v. State of California* (1984) 156 Cal. App. 3d 182 [203 Cal. Rptr. 258], to the extent it reached a different conclusion with respect to expenses incurred by local entities as the result of a newly enacted law requiring that all public employees by covered by unemployment insurance.)

[See **Cal.Jur.3d,** State of California, § 78.]

(6) Constitutional Law § 14--Construction of Constitutions--Reconcilable and Irreconcilable Conflicts. --Controlling principles of construction require that in the absence of irreconcilable conflict among their various parts, constitutional provisions must be harmonized and construed to give effect to all parts.

(7) Constitutional Law § 14--Construction of Constitutions--Reconcilable and Irreconcilable Conflicts--Pro Tanto Repeal of Constitutional Provision. --The goals of Cal. Const., art XIII B, § 6 (reimbursement to local agencies for new programs and services), were to protect residents from excessive taxation and government spending, and to preclude a shift of financial responsibility for governmental functions from the state to local agencies. Since these goals can be achieved in the absence of state subvention for the expense of increases in workers' compensation benefit levels for local agency employees, the adoption of art. XIII B, § 6, did not effect a pro tanto repeal of Cal. Const., art. XIV, § 4, which gives the Legislature plenary power over workers' compensation.

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JUDGES: Opinion by Grodin, J., with Bird, C. J., Broussard, Reynoso, Lucas and Panelli, JJ., concurring. Separate concurring opinion by Mosk, J.

OPINION BY: GRODIN

OPINION

[*49] [**203] [***38] We are asked in this proceeding to determine whether legislation enacted in 1980 and 1982 increasing certain workers' compensation benefit payments is subject to the command of article XIII B of the California Constitution that local government costs mandated by the state must be funded by the state. The County of Los Angeles and the City of Sonoma sought review by this court of a decision of the Court of Appeal which held that state-mandated increases [***39] in workers' compensation benefits that do not exceed the rise in the cost of living are not costs which must be borne by the state under article XIII B, an initiative constitutional provision, and legislative implementing statutes.

Although we agree that the State Board of Control properly denied plaintiffs' claims, our conclusion rests on grounds other than those relied upon by the Court of Appeal, and requires that its judgment be reversed. (1) We conclude that when the voters adopted article XIII B, section 6, their intent was not to require the state to provide subvention whenever a newly enacted statute resulted incidentally in some cost to local agencies. [HN1]Rather, the drafters and the electorate had in mind subvention for the expense or [*50] increased cost of programs administered locally and for expenses occasioned by laws that impose unique requirements on local governments and do not apply generally to all state residents or entities. In using the word "programs" they had in mind the commonly understood meaning of the term, programs which carry out the governmental function of providing services to the public. Reimbursement for the cost or increased cost of providing workers' compensation benefits to employees of local agencies is not, therefore, required by section 6.

We recognize also the potential conflict between article XIII B and the grant of plenary power over workers' compensation bestowed upon the Legislature by section 4 of article XIV, but in accord with established rules of

construction our construction of article XIII B, section 6, harmonizes these constitutional provisions.

I

On November 6, 1979, the voters approved an initiative measure which added article XIII B to the California Constitution. That article imposed spending limits on the state and local governments and provided in section 6 (hereafter section 6): "Whenever the Legislature or any state agency mandates a new program or higher level of [**204] service on any local government, the state shall provide a subvention of funds to reimburse such local government for the costs of such program or increased level of service, except that the Legislature may, but need not, provide such subvention of funds for the following mandates: [para.] (a) Legislative mandates requested by the local agency affected; [para.] (b) Legislation defining a new crime or changing an existing definition of a crime; or [para.] (c) Legislative mandates enacted prior to January 1, 1975, or executive orders or regulations initially implementing legislation enacted prior to January 1, 1975." No definition of the phrase "higher level of service" was included in article XIII B, and the ballot materials did not explain its meaning. [1]

1 The analysis by the Legislative Analyst advised that the state would be required to "reimburse local governments for the cost of complying with 'state mandates.' 'State mandates' are requirements imposed on local governments by legislation or executive orders." Elsewhere the analysis repeats: "[The] initiative would establish a requirement that the state provide funds to reimburse local agencies for the cost of complying with state mandates . . . .

The one ballot argument which made reference to section 6, referred only to the "new program" provision, stating, "Additionally, this measure [para.] (1) will not allow the state government to force programs on local governments without the state paying for them."

The genesis of this action was the enactment in 1980 and 1982, after article XIII B had been adopted, of laws increasing the amounts which [*51] employers, including local governments, must pay in workers' compensation benefits to injured employees and families of deceased employees.

The first of these statutes, Assembly, Bill No. 2750 (Stats. 1980, ch. 1042, p. 3328), amended several sections of the Labor Code related to workers' compensation. The amendments of Labor Code sections 4453, 4453.1 and 4460 increased the maximum weekly wage upon which temporary and permanent disability indemnity is computed from $ 231 per week to $ 262.50 per week. The amendment of section 4702 of the Labor Code increased certain death benefits from $ 55,000 to $ 75,000. No appropriation [***40] for increased state-mandated costs was made in this legislation. [2]

2 The bill was approved by the Governor and filed with the Secretary of State on September 22, 1980. Prior to this, the Assembly gave unanimous consent to a request by the bill's author that his letter to the Speaker stating the intent of the Legislation be printed in the Assembly Journal. The letter stated: (1) that the Assembly Ways and Means Committee had recommended approval without appropriation on grounds that the increases were a result of changes in the cost of living that were not reimbursable under either Revenue and Taxation Code section 2231, or article XIII B; (2) the Senate Finance Committee had rejected a motion to add an appropriation and had approved a motion to concur in amendments of the Conference Committee deleting any appropriation.

Legislative history confirms only that the final version of Assembly Bill No. 2750, as amended in the Assembly on April 16, 1986, contained no appropriation. As introduced on March 4, 1980, with a higher minimum salary of $ 510 on which to base benefits, an unspecified appropriation was included.

Test claims seeking reimbursement for the increased expenditure mandated by these changes were filed with the State Board of Control in 1981 by the County of San Bernardino and the City of Los Angeles. The board rejected the claims, after hearing, stating that the increased maximum workers' compensation benefit levels did not change the terms or conditions under which benefits were to be awarded, and therefore did not, by increasing the dollar amount of the benefits, create an increased level of service. The first of these consolidated actions was then filed by the County of Los Angeles, the County of San Bernardino, and the City of San Diego, seeking a writ of mandate to compel the board to approve the reimbursement claims for costs incurred in providing an increased level of service mandated by the state pursuant to Revenue and Taxation Code section 2207. [3] They also sought a declaration that because the State of California and the board were obliged by article XIII B to reimburse them, they were not obligated to [**205] pay the increased benefits until the state provided reimbursement.

3 The superior court consolidated another action by the County of Butte, Novato Fire Protection District, and the Galt Unified School District

with that action. Neither those plaintiffs nor the County of San Bernardino are parties to the appeal.

The superior court denied relief in that action. The court recognized that although increased benefits reflecting cost of living raises were not expressly [*52] excepted from the requirement of state reimbursement in section 6 the intent of article XIII B to limit governmental expenditures to the prior year's level allowed local governments to make adjustment for changes in the cost of living, by increasing their own appropriations. Because the Assembly Bill No. 2750 changes did not exceed cost of living changes, they did not, in the view of the trial court, create an "increased level of service" in the existing workers' compensation program.

The second piece of legislation (Assem. Bill No. 684), enacted in 1982 (Stats. 1982, ch. 922. p. 3363), again changed the benefit levels for workers' compensation by increasing the maximum weekly wage upon which benefits were to be computed, and made other changes among which were: The bill increased minimum weekly earnings for temporary and permanent total disability from $ 73.50 to $ 168, and the maximum from $ 262.50 to $ 336. For permanent partial disability the weekly wage was raised from a minimum of $ 45 to $ 105, and from a maximum of $ 105 to $ 210, in each case for injuries occurring on or after January 1, 1984. (Lab. Code, § 4453.) A $ 10,000 limit on additional compensation for injuries resulting from serious and willful employer misconduct was removed (Lab. Code, § 4553), and the maximum death benefit was raised from $ 75,000 to $ 85,000 for deaths in 1983, and to $ 95,000 for deaths on or after January 1, 1984. (Lab. Code, § 4702.)

Again the statute included no appropriation and this time the statute expressly acknowledged that the omission was made "[notwithstanding] section 6 of Article XIIIB of the California Constitution and section 2231 . . . of the Revenue and Taxation [***41] Code." (Stats. 1982, ch. 922, § 17, p. 3372.) [4]

4 The same section "recognized," however, that a local agency "may pursue any remedies to obtain reimbursement available to it" under the statutes governing reimbursement for state-mandated costs in chapter 3 of the Revenue and Taxation Code, commencing with section 2201.

Once again test claims were presented to the State Board of Control, this time by the City of Sonoma, the County of Los Angeles, and the City of San Diego. Again the claims were denied on grounds that the statute made no change in the terms and conditions under which workers' compensation benefits were to be awarded, and the increased costs incurred as a result of higher benefit levels did not create an increased level of service as defined in Revenue and Taxation Code section 2207, subdivision (a).

The three claimants then filed the second action asking that the board be compelled by writ of mandate to approve the claims and the state to pay them, and that chapter 922 be declared unconstitutional because it was not adopted in conformity with requirements of the Revenue and Taxation Code or [*53] section 6. The trial court granted partial relief and ordered the board to set aside its ruling. The court held that the board's decision was not supported by substantial evidence and legally adequate findings on the presence of a state-mandated cost. The basis for this ruling was the failure of the board to make adequate findings on the possible impact of changes in the burden of proof in some workers' compensation proceedings (Lab. Code, § 3202.5); a limitation on an injured worker's right to sue his employer under the "dual capacity" exception to the exclusive remedy doctrine (Lab. Code, §§ 3601- 3602); and changes in death and disability benefits and in liability in serious and wilful misconduct cases. (Lab. Code, § 4551.)

The court also held: "[The] changes made by chapter 922, Statutes of 1982 may be excluded from state-mandated costs if that change effects a cost of living increase which does not impose a higher or increased level of service on an existing program." The City of Sonoma, the County of Los Angeles, and the City of San Diego [**206] appeal from this latter portion of the judgment only.

II

The Court of Appeal consolidated the appeals. The court identified the dispositive issue as whether legislatively mandated increases in workers' compensation benefits constitute a "higher level of service" within the meaning of section 6, or are an "increased level of service" [5] described in subdivision (a) of Revenue and Taxation Code section 2207 . The parties did not question the proposition that higher benefit payments might constitute a higher level of "service." The dispute centered on whether higher benefit payments which do not exceed increases in the cost of living constitute a higher level of service. Appellants maintained that the reimbursement requirement of section 6 is absolute and permits no implied or judicially created exception for increased costs that do not exceed the inflation rate. The Court of Appeal addressed the problem as one of defining "increased level of service."

5 The court concluded that there was no legal or semantic difference in the meaning of the terms and considered the intent or purpose of the two provisions to be identical.

The court rejected appellants' argument that a definition of "increased level of service" that once had been included in section 2231, subdivision (e) of the Revenue and Taxation Code should be applied. That definition brought any law that imposed "additional costs" within the scope of "increased level of service." The court concluded that the repeal of section 2231 in 1975 (Stats. 1975, ch. 486, § 7, pp. 999-1000) and the failure of the Legislature by statute or the electorate in article XIII B to readopt the [*54] definition must be treated as reflecting an intent to change the law. (*Eu* v. *Chacon* (1976) 16 Cal.3d 465, 470 [128 Cal. Rptr. 1, 546 P.2d 289].) [6] On that basis the court [***42] concluded that increased costs were no longer tantamount to an increased level of service.

6 The Court of Appeal also considered the expression of legislative intent reflected in the letter by the author of Assembly Bill No. 2750 (see fn. 2, *ante*). While consideration of that expression of intent may have been proper in construing Assembly Bill No. 2750, we question its relevance to the proper construction of either section 6, adopted by the electorate in the prior year, or of Revenue and Taxation Code section 2207, subdivision (a) enacted in 1975. (Cf. *California Employment Stabilization Co.* v. *Payne* (1947) 31 Cal.2d 210, 213-214 [187 P.2d 702].) There is no assurance that the Assembly understood that its approval of printing a statement of intent as to the later bill was also to be read as a statement of intent regarding the earlier statute, and it was not relevant to the intent of the electorate in adopting section 6.

The Court of Appeal also recognized that the history of Assembly Bill No. 2750 and Statutes 1982, chapter 922, which demonstrated the clear intent of the Legislature to omit any appropriation for reimbursement of local government expenditures to pay the higher benefits precluded reliance on reimbursement provisions included in benefit-increase bills passed in earlier years. (See e.g., Stats. 1973, chs. 1021 and 1023.)

The court nonetheless assumed that an increase in costs mandated by the Legislature did constitute an increased level of service if the increase exceeds that in the cost of living. The judgment in the second, or "Sonoma" case was affirmed. The judgment in the first, or "Los Angeles" case, however, was reversed and the matter "remanded" to the board for more adequate findings, with directions. [7]

7 We infer that the intent of the Court of Appeal was to reverse the order denying the petition for writ of mandate and to order the superior court to grant the petition and remand the matter to the board with directions to set aside its order and reconsider the claim after making the additional findings. (See Code Civ. Proc. § 1094.5, subd. (f).)

III

The Court of Appeal did not articulate the basis for its conclusion that costs in excess of the increased cost of living do constitute a reimbursable increased level of service within the meaning of section 6. Our task in ascertaining the meaning of the phrase is aided somewhat by one explanatory reference to this part of section 6 in the ballot materials.

A statutory requirement of state reimbursement was in effect when section 6 [**207] was adopted. That provision used the same "increased level of service" phraseology but it also failed to include a definition of "increased level of service," providing only: "Costs mandated by the state' means any increased costs which a local agency is required to incur as a result of the following: [para.] (a) Any law . . . which mandates a new program or an increased level of service of an existing program." (Rev. & Tax. Code § 2207.) As noted, however, the definition of that term which had been [*55] included in Revenue and Taxation Code section 2164.3 as part of the Property Tax Relief Act of 1972 (Stats. 1972, ch. 1406, § 14.7, p. 2961), had been repealed in 1975 when Revenue and Taxation Code section 2231, which had replaced section 2164.3 in 1973, was repealed and a new section 2231 enacted. (Stats. 1975. ch. 486, §§ 6 & 7, p. 999.) [8] Prior to repeal, Revenue and Taxation Code section 2164.3 , and later section 2231, after providing in subdivision (a) for state reimbursement, explained in subdivision (e) that ""Increased level of service' means any requirement mandated by state law or executive regulation . . . which makes necessary expanded or additional costs to a county, city and county, city, or special district." (Stats. 1972, ch. 1406, § 14.7, p. 2963.)

8 Pursuant to the 1972 and successor 1973 property tax relief statutes the Legislature had included appropriations in measures which, in the opinion of the Legislature, mandated new programs or increased levels of service in existing programs (see, e.g., Stats. 1973, ch. 1021, § 4, p. 2026; ch. 1022, § 2, p. 2027; Stats. 1976, ch. 1017, § 9, p. 4597) and reimbursement claims

filed with the State Board of Control pursuant to Revenue and Taxation Code sections 2218-2218.54 had been honored. When the Legislature fails to include such appropriations there is no judicially enforceable remedy for the statutory violation notwithstanding the command of Revenue and Taxation Code section 2231, subdivision (a) that "[the] state shall reimburse each local agency for all 'costs mandated by the state,' as defined in Section 2207" and the additional command of subdivision (b) that any statute imposing such costs "provide an appropriation therefor." (*County of Orange* v. *Flournoy* (1974) 42 Cal. App. 3d 908, 913 [117 Cal. Rptr. 224].)

[***43] (2) Appellants contend that despite its repeal, the definition is still valid, relying on the fact that the Legislature, in enacting section 2207, explained that the provision was "declaratory of existing law." (Stats. 1975, ch. 486, § 18.6, p. 1006.) We concur with the Court of Appeal in rejecting this argument. [HN2]"[It] is ordinarily to be presumed that the Legislature by deleting an express provision of a statute intended a substantial change in the law." (*Lake Forest Community Assn.* v. *County of Orange* (1978) 86 Cal. App. 3d 394, 402 [150 Cal. Rptr. 286]; see also *Eu* v. *Chacon, supra,* 16 Cal.3d 465, 470.) Here, the revision was not minor: a whole subdivision was deleted. As the Court of Appeal noted, "A change must have been intended; otherwise deletion of the preexisting definition makes no sense."

Acceptance of appellants' argument leads to an unreasonable interpretation of section 2207. If the Legislature had intended to continue to equate "increased level of service" with "additional costs," then the provision would be circular: "costs mandated by the state" are defined as "increased costs" due to an "increased level of service," which, in turn, would be defined as "additional costs." We decline to accept such an interpretation. Under the repealed provision, "additional costs" may have been deemed tantamount to an "increased level of service," but not under the post-1975 statutory scheme. Since that definition has been repealed, an act of which the drafters of section 6 and the electorate are presumed to have been [*56] aware, we may not conclude that an intent existed to incorporate the repealed definition into section 6.

(3) [HN3]In construing the meaning of the constitutional provision, our inquiry is not focussed on what the Legislature intended in adopting the former statutory reimbursement scheme, but rather on what the voters meant when they adopted article XIII B in 1979. To determine this intent, we must look to the language of the provision itself. (*ITT World Communications, Inc.* v. *City and County of San Francisco* (1985) 37 Cal.3d 859, 866 [210 Cal. Rptr. 226, 693 P.2d 811].) In section 6, the electorate commands [**208] that the state reimburse local agencies for the cost of any "new program or higher level of service." Because workers' compensation is not a new program, the parties have focussed on whether providing higher benefit payments constitutes provision of a higher level of service. As we have observed, however, the former statutory definition of that term has been incorporated into neither section 6 nor the current statutory reimbursement scheme.

(4) Looking at the language of section 6 then, it seems clear that by itself the term "higher level of service" is meaningless. It must be read in conjunction with the predecessor phrase "new program" to give it meaning. Thus read, it is apparent that the subvention requirement for increased or higher level of service is directed to state mandated increases in the services provided by local agencies in existing "programs." But the term "program" itself is not defined in article XIII B. What programs then did the electorate have in mind when section 6 was adopted? We conclude that the drafters and the electorate had in mind the commonly understood meanings of the term -- programs that carry out the governmental function of providing services to the public, or laws which, to implement a state policy, impose unique requirements on local governments and do not apply generally to all residents and entities in the state.

The concern which prompted the inclusion of section 6 in article XIII B was the perceived attempt by the state to enact legislation or adopt administrative orders creating programs to be administered by local agencies, thereby transferring to those agencies the fiscal responsibility for providing services which the state believed should be extended to the public. In their ballot arguments, the proponents of article XIII B explained section 6 to the voters: "Additionally, this measure: (1) Will not allow the state government to *force programs* on local governments without the state paying for them." (Ballot Pamp., Proposed Amend. to Cal. Const. with arguments [***44] to voters, Spec. Statewide Elec. (Nov. 6, 1979) p. 18. Italics added.) In this context the phrase "to force programs on local governments" confirms that the intent underlying section 6 was to require reimbursement to local agencies for the costs involved in carrying out functions peculiar to government, not [*57] for expenses incurred by local agencies as an incidental impact of laws that apply generally to all state residents and entities. Laws of general application are not passed by the Legislature to "force" programs on localities.

The language of section 6 is far too vague to support an inference that it was intended that each time the Legislature passes a law of general application it must discern the likely effect on local governments and provide an appropriation to pay for any incidental increase in

local costs. We believe that if the electorate had intended such a far-reaching construction of section 6, the language would have explicitly indicated that the word "program" was being used in such a unique fashion. (Cf. *Fuentes* v. *Workers' Comp. Appeals Bd.* (1976) 16 Cal.3d 1, 7 [128 Cal. Rptr. 673, 547 P.2d 449]; *Big Sur Properties* v. *Mott* (1976) 63 Cal. App. 3d 99, 105 [132 Cal. Rptr. 835].) Nothing in the history of article XIII B that we have discovered, or that has been called to our attention by the parties, suggests that the electorate had in mind either this construction or the additional indirect, but substantial impact it would have on the legislative process.

[HN4]Were section 6 construed to require state subvention for the incidental cost to local governments of general laws, the result would be far-reaching indeed. Although such laws may be passed by simple majority vote of each house of the Legislature (art. IV, § 8, subd. (b)), the revenue measures necessary to make them effective may not. A bill which will impose costs subject to subvention of local agencies must be accompanied by a revenue measure providing the subvention required by article XIII B. (Rev. & Tax. Code, §§ 2255, subd. (c).) Revenue bills must be passed by two-thirds vote of each house of the Legislature. (Art. IV, § 12, subd. (d).) Thus, were we to construe section 6 as [**209] applicable to general legislation whenever it might have an incidental effect on local agency costs, such legislation could become effective only if passed by a supermajority vote. [9] Certainly no such intent is reflected in the language or history of article XIII B or section 6.

9 Whether a constitutional provision which requires a supermajority vote to enact substantive legislation, as opposed to funding the program, may be validly enacted as a Constitutional amendment rather than through revision of the Constitution is an open question. (See *Amador Valley Joint Union High Sch. Dist.* v. *State Bd. of Equalization* (1978) 22 Cal.3d 208, 228 [149 Cal. Rptr. 239, 583 P.2d 1281].)

(5) We conclude therefore that section 6 has no application to, and the state need not provide subvention for, the costs incurred by local agencies in providing to their employees the same increase in workers' compensation [*58] benefits that employees of private individuals or organizations receive. [10] Workers' compensation is not a program administered by local agencies to provide service to the public. Although local agencies must provide benefits to their employees either through insurance or direct payment, they are indistinguishable in this respect from private employers. [HN5]In no sense can employers, public or private, be considered to be administrators of a program of workers' compensation or to be providing services incidental to administration of the program. Workers' compensation is administered by the state through the Division of Industrial Accidents and the Workers' Compensation Appeals Board. (See [***45] Lab. Code, § 3201 et seq.) Therefore, although the state requires that employers provide workers' compensation for nonexempt categories of employees, increases in the cost of providing this employee benefit are not subject to reimbursement as state-mandated programs or higher levels of service within the meaning of section 6.

10 The Court of Appeal reached a different conclusion in *City of Sacramento* v. *State of California* (1984) 156 Cal. App. 3d 182 [203 Cal. Rptr. 258], with respect to a newly enacted law requiring that all public employees be covered by unemployment insurance. Approaching the question as to whether the expense was a "state mandated cost," rather than as whether the provision of an employee benefit was a "program or service" within the meaning of the Constitution, the court concluded that reimbursement was required. To the extent that this decision is inconsistent with our conclusion here, it is disapproved.

IV

(6) [HN6]Our construction of section 6 is further supported by the fact that it comports with controlling principles of construction which "require that in the absence of irreconcilable conflict among their various parts, [constitutional provisions] must be harmonized and construed to give effect to all parts. (*Clean Air Constituency* v. *California State Air Resources Bd.* (1974) 1 Cal.3d 801, 813-814 [114 Cal. Rptr. 577, 523 P.2d 617]; *Serrano* v. *Priest* (1971) 5 Cal.3d 584, 596 [96 Cal. Rptr. 601, 487 P.2d 1241, 41 A.L.R.3d 1187]; *Select Base Materials* v. *Board of Equal.* (1959) 51 Cal.2d 640, 645 [335 P.2d 672].)" (*Legislature* v. *Deukmejian* (1983) 34 Cal.3d 658, 676 [194 Cal. Rptr. 781, 669 P.2d 17].)

[HN7]Our concern over potential conflict arises because article XIV, section 4, [11] gives the [**210] Legislature "plenary power, unlimited by any provision of [*59] this Constitution" over workers' compensation. Although seemingly unrelated to workers' compensation, section 6, as we have shown, would have an indirect, but substantial impact on the ability of the Legislature to make future changes in the existing workers' compensation scheme. Any changes in the system which would increase benefit levels, provide new services, or extend current service might also increase local agencies' costs. Therefore, even though workers' compensation is a program which is intended [***46] to provide benefits to all injured or deceased employees and their families, because the change might have some incidental impact

on local government costs, the change could be made only if it commanded a supermajority vote of two-thirds of the members of each house of the Legislature. The potential conflict between section 6 and the plenary power over workers' compensation granted to the Legislature by article XIV, section 4 is apparent.

> 11 [HN8]Section 4: "The Legislature is hereby *expressly vested with plenary power, unlimited by any provision of this Constitution*, to create, and enforce a complete system of workers' compensation, by appropriate legislation, and in that behalf to create and enforce a liability on the part of any or all persons to compensate any or all of their workers for injury or disability, and their dependents for death incurred or sustained by the said workers in the course of their employment, irrespective of the fault of any party. A complete system of workers' compensation includes adequate provisions for the comfort, health and safety and general welfare of any and all workers and those dependent upon them for support to the extent of relieving from the consequences of any injury or death incurred or sustained by workers in the course of their employment, irrespective of the fault of any party; also full provision for securing safety in places of employment; full provision for such medical, surgical, hospital and other remedial treatment as is requisite to cure and relieve from the effects of such injury; full provision for adequate insurance coverage against liability to pay or furnish compensation; full provision for regulating such insurance coverage in all its aspects, including the establishment and management of a State compensation insurance fund; full provision for otherwise securing the payment of compensation and full provision for vesting power, authority and jurisdiction in an administrative body with all the requisite governmental functions to determine any dispute or matter arising under such legislation, to the end that the administration of such legislation shall accomplish substantial justice in all cases expeditiously, inexpensively, and without encumbrance of any character; all of which matters are expressly declared to be the social public policy of this State, binding upon all departments of the State government.
>
> "The Legislature is vested with plenary powers, to provide for the settlement of any disputes arising under such legislation by arbitration, or by an industrial accident commission, by the courts, or by either, any, or all of these agencies, either separately or in combination, and may fix and control the method and manner of trial of any such dispute, the rules of evidence and the manner of review of decisions rendered by the tribunal or tribunals designated by it; provided, that all decisions of any such tribunal shall be subject to review by the appellate courts of this State. The Legislature may combine in one statute all the provisions for a complete system of workers' compensation, as herein defined.
>
> "The Legislature shall have power to provide for the payment of an award to the state in the case of the death, arising out of and in the course of the employment, of an employee without dependents, and such awards may be used for the payment of extra compensation for subsequent injuries beyond the liability of a single employer for awards to employees of the employer.
>
> "Nothing contained herein shall be taken or construed to impair or render ineffectual in any measure the creation and existence of the industrial accident commission of this State or the State compensation insurance fund, the creation and existence of which, with all the functions vested in them, are hereby ratified and confirmed." (Italics added.)

The County of Los Angeles, while recognizing the impact of section 6 on the Legislature's power over workers' compensation, argues that the "plenary power" granted by article XIV, section 4, is power over the substance of workers' compensation legislation, and that this power would be unaffected by article XIII B if the latter is construed to compel reimbursement. The subvention requirement, it is argued, is analogous to other procedural [*60] limitations on the Legislature, such as the "single subject rule" (art. IV, § 9), as to which article XIV, section 4, has no application. We do not agree. A constitutional requirement that legislation either exclude employees of local governmental agencies or be adopted by a supermajority vote would do more than simply establish a format or procedure by which legislation is to be enacted. It would place workers' compensation legislation in a special classification of substantive legislation and thereby curtail the power of a majority to enact substantive changes by any procedural means. If section 6 were applicable, therefore, article XIII B would restrict the power of the Legislature over workers' compensation.

The City of Sonoma concedes that so construed article XIII B *would* restrict the plenary power of the Legislature, and reasons that the provision therefore either effected a pro tanto repeal of article XIV, section 4, or must be accepted as a limitation on the power of the Legislature. We need not accept that conclusion, how-

ever, because our construction of section 6 permits the constitutional provisions to be reconciled.

Construing a recently enacted constitutional provision such as section 6 to avoid conflict with, and thus pro tanto repeal of, an earlier provision is also consistent with [**211] and reflects the principle applied by this court in *Hustedt* v. *Workers' Comp. Appeals Bd.* (1981) 30 Cal.3d 329 [178 Cal. Rptr. 801, 636 P.2d 1139]. There, by coincidence, article XIV, section 4, was the later provision. A statute, enacted pursuant to the plenary power of the Legislature over workers' compensation, gave the Workers' Compensation Appeals Board authority to discipline attorneys who appeared before it. If construed to include a transfer of the authority to discipline attorneys from the Supreme Court to the Legislature, or to delegate that power to the board, article XIV, section 4, would have conflicted with the constitutional power of this court over attorney discipline and might have violated the separation of powers doctrine. (Art. III, § 3.) The court was thus called upon to determine whether the adoption of article XIV, section 4, granting the Legislature plenary power over workers' compensation effected a pro tanto repeal of the preexisting, exclusive jurisdiction of the Supreme Court over attorneys.

We concluded that there had been no pro tanto repeal because article XIV, section 4, did not give the Legislature the authority to enact the statute. Article XIV, section 4, did not expressly give the Legislature power over attorney discipline, and that power was not integral to or necessary to the establishment of a complete system of workers' compensation. In those circumstances the presumption against implied repeal controlled. "It is well established that the adoption of article XIV, section 4 'effected a repeal *pro tanto*' of any state constitutional provisions which conflicted with that [*61] amendment. (*Subsequent Etc. Fund.* v. *Ind. Acc. Com.* (1952) 39 Cal.2d 83, 88 [244 P.2d 889]; *Western Indemnity Co.* v. *Pillsbury* (1915) 170 Cal. 686, 695, [151 P. 398].) [HN9]A *pro tanto* repeal of conflicting state constitutional provisions removes 'insofar as necessary' any restrictions which would prohibit the realization [***47] of the objectives of the new article. (*Methodist Hosp. of Sacramento* v. *Saylor* (1971) 5 Cal.3d 685, 691-692 [97 Cal. Rptr. 1, 488 P.2d 161]; cf. *City and County of San Francisco* v. *Workers' Comp. Appeals Bd.* (1978) 22 Cal.3d 103, 115-117 [148 Cal. Rptr. 626, 583 P.2d 151].) Thus the question becomes whether the board must have the power to discipline attorneys if the objectives of article XIV, section 4 are to be effectuated. In other words, does the achievement of those objectives compel the modification of a power -- the disciplining of attorneys -- that otherwise rests exclusively with this court?" (*Hustedt* v. *Workers' Comp. Appeals Bd.*, *supra*, 30 Cal.3d 329, 343.) We concluded that the ability to discipline attorneys appearing before it was not necessary to the expeditious resolution of workers' claims or the efficient administration of the agency. Thus, the absence of disciplinary power over attorneys would not preclude the board from achieving the objectives of article XIV, section 4, and no pro tanto repeal need be found.

(7) A similar analysis leads to the conclusion here that no pro tanto repeal of article XIV, section 4, was intended or made necessary here by the adoption of section 6. The goals of article XIII B, of which section 6 is a part, were to protect residents from excessive taxation and government spending. (*Huntington Park Redevelopment Agency* v. *Martin* (1985) 38 Cal.3d 100, 109-110 [211 Cal. Rptr. 133, 695 P.2d 220].) Section 6 had the additional purpose of precluding a shift of financial responsibility for carrying out governmental functions from the state to local agencies which had had their taxing powers restricted by the enactment of article XIII A in the preceding year and were ill equipped to take responsibility for any new programs. Neither of these goals is frustrated by requiring local agencies to provide the same protections to their employees as do private employers. Bearing the costs of salaries, unemployment insurance, and workers' compensation coverage -- costs which all employers must bear -- neither threatens excessive taxation or governmental spending, nor shifts from the state to a local agency the expense of providing governmental services.

[**212] Therefore, since the objectives of article XIII B and section 6 can be achieved in the absence of state subvention for the expense of increases in workers' compensation benefit levels for local agency employees, section 6 did not effect a pro tanto repeal of the Legislature's otherwise plenary power over workers' compensation, a power that does not contemplate that the Legislature rather than the employer must fund the cost or increases in [*62] benefits paid to employees of local agencies, or that a statute affecting those benefits must garner a supermajority vote.

Because we conclude that section 6 has no application to legislation that is applicable to employees generally, whether public or private, and affects local agencies only incidentally as employers, we need not reach the question that was the focus of the decision of the Court of Appeal -- whether the state must reimburse localities for state-mandated cost increases which merely reflect adjustments for cost-of-living in existing programs.

V

It follows from our conclusions above, that in each of these cases the plaintiffs' reimbursement claims were properly denied by the State Board of Control. Their petitions for writs of mandate seeking to compel the board to approve the claims lacked merit and should

have been denied by the superior court without the necessity of further proceedings before the board.

In B001713, the Los Angeles case, the Court of Appeal reversed the judgment of the superior court denying the petition. In the B003561, the Sonoma case, the superior court granted partial relief, ordering further proceedings before the board, and the Court of Appeal affirmed that judgment.

The judgment of the Court of Appeal is reversed. Each side shall bear its own costs.

CONCUR BY: MOSK

CONCUR

MOSK, J. I concur in the result reached by the majority, but I prefer the rationale of the Court of Appeal, i.e., that neither article XIII B, section 6, of the Constitution nor Revenue and Taxation Code sections 2207 and 2231 require state subvention for increased workers' compensation benefits provided by chapter 1042, Statutes of 1980, and chapter 922, Statutes of 1982, but only if the increases do not exceed applicable cost-of-living adjustments because such payments do not result in an increased level of service.

Under the majority theory, the state can order unlimited financial burdens on local units of government without providing the funds to meet those burdens. This may have serious implications in the future, and does violence to the requirement of section 2231, subdivision (a), that the state reimburse local government for "all costs mandated by the state."

In this instance it is clear from legislative history that the Legislature did not intend to mandate additional burdens, but merely to provide a cost-of-living [*63] adjustment. I agree with the Court of Appeal that this was permissible.

TAB "13"

LEXSEE

Caution
As of: Jun 23, 2010

COUNTY OF SAN DIEGO, Cross-complainant and Respondent, v. THE STATE OF CALIFORNIA et al., Cross-defendants and Appellants.

No. S046843.

SUPREME COURT OF CALIFORNIA

15 Cal. 4th 68; 931 P.2d 312; 61 Cal. Rptr. 2d 134; 1997 Cal. LEXIS 630; 97 Cal. Daily Op. Service 1555; 97 Daily Journal DAR 2296

March 3, 1997, Decided

PRIOR HISTORY: Superior Court of San Diego County, Super. Ct. No. 634931. Michael I. Greer, * Harrison R. Hollywood and Judith McConnell, Judges.

* Retired judge of the San Diego Superior Court assigned by the Chief Justice pursuant to article VI, section 6 of the California Constitution.

DISPOSITION: The judgment of the Court of Appeal is affirmed insofar as it holds that the exclusion of adult MIP's from Medi-Cal imposed a mandate on San Diego within the meaning of section 6. The judgment is reversed insofar as it holds that the state required San Diego to spend at least $ 41 million on the CMS program in fiscal years 1989-1990 and 1990-1991. The matter is remanded to the Commission to determine whether, and by what amount, the statutory standards of care (e.g., Health & Saf. Code, § 1442.5, former subd. (c); Welf. & Inst. Code, § 10000, 17000) forced San Diego to incur costs in excess of the funds provided by the state, and to determine the statutory remedies to which San Diego is entitled.

CASE SUMMARY:

PROCEDURAL POSTURE: Appellant state sought review of the judgment from the Court of Appeal (California), which affirmed the trial court that reversed a decision of the state mandates commission. The state mandates commission had held that respondent county was not entitled to reimbursement under Cal. Const. art. XIII B, § 6, for its treatment of medically indigent adults after the legislature excluded such persons from the California Medical Assistance Program.

OVERVIEW: The legislature excluded medically indigent adults from receiving medical care pursuant to the California Medical Assistance Program (Medi-Cal). Subsequently, respondent county provided medical care to these persons and sought reimbursement from appellant state pursuant to Cal. Const. art. XIII B, § 6. The state mandates commission held for appellant, but the trial court reversed the commission's decision, and the court of appeals affirmed the trial court. The court affirmed the court of appeal's decision in part and reversed in part. The court found that the legislature's exclusion of medically indigent adults from Medi-Cal mandated a new program within the meaning of art. XIII B, § 6. Former statutes, however, did not establish a $ 41 million spending floor for respondent's county medical services program. The court remanded the action to the state mandates commission to determine whether, and by what amount, respondent was forced to incur costs in excess of state-provided funds to comply with the standards of care provided by the former Cal. Health & Safety Code § 1442.5(c) and Cal. Welf. & Inst. Code §§ 10000, 17000.

OUTCOME: The court affirmed the court of appeal's judgment that respondent county could recover costs incurred to treat medically indigent adults because the legislature mandated a new program by excluding medically indigent adults from the California Medical Assistance Program. The court reversed the court of appeal's judgment that respondent was entitled to at least $ 41

million and remanded to the state mandates commission for a cost determination.

CORE TERMS: medical care, adult, indigent, reimbursement, medically, funding, health care, level of service, fiscal years, new program, indigent persons, mandamus, local government, eligibility, eligible, financial responsibility, reimburse, state mandate, test claim, medical services, state-mandated, reimbursable, former subd, linked, fiscal, budget, mandated, local agencies, health services, settlement

LexisNexis(R) Headnotes

Governments > State & Territorial Governments > General Overview
Public Health & Welfare Law > Healthcare > General Overview
Public Health & Welfare Law > Social Security > Medicaid > Coverage > General Overview
[HN1]The California Medical Assistance Program, Cal. Welf. & Inst. Code § 14063, which began operating March 1, 1966, establishes a program of basic and extended health care services for recipients of public assistance and for medically indigent persons. It represents California's implementation of the federal medicaid program, 42 U.S.C.S. §§ 1396-1396v, through which the federal government provides financial assistance to states so that they may furnish medical care to qualified indigent persons.

Governments > Local Governments > Finance
Healthcare Law > Insurance > Reimbursement > General Overview
Public Health & Welfare Law > Social Security > Medicaid > Providers > Payments & Reimbursements > Hospitals
[HN2]Former Cal. Welf. & Inst. Code § 14150.1 provides in part that a county may elect to pay as its share of costs under the California Medical Assistance Program, Cal. Welf. & Inst. Code § 14063, 100 percent of the county cost of health care uncompensated from any source in 1964-65 for all categorical aid recipients, and all other persons in the county hospital or in a contract hospital, increases for such county for each fiscal year subsequent to 1964-65 by an amount proportionate to the increase in population for such county. If the county so elects, the county costs of health care in any fiscal year shall not exceed the total county costs of health care uncompensated from any source in 1964-65 for all categorical aid recipients, and all other persons in the county hospital or in a contract hospital, increases for such county for each fiscal year subsequent to 1964-65 by an amount proportionate to the increase in population for such county.

Governments > Local Governments > Finance
Healthcare Law > Insurance > Reimbursement > General Overview
Public Health & Welfare Law > Social Security > Medicaid > General Overview
[HN3]Former Cal. Welf. & Inst. Code § 14150 provides the standard method for determining the counties' share of costs under the California Medical Assistance Program, Cal. Welf. & Inst. Code § 14063. Under it, a county is required to pay the state a specific sum, in return for which the state will pay for the medical care of all categorically linked individuals. Financial responsibility for nonlinked individuals remains with the counties.

Governments > Local Governments > Finance
Governments > State & Territorial Governments > Finance
[HN4]Cal. Const. art. XIII A imposes a limit on the power of state and local governments to adopt and levy taxes. Cal. Const. art. XIII B imposes a complementary limit on the rate of growth in governmental spending. These two constitutional articles work in tandem, together restricting California governments' power both to levy and to spend for public purposes.

Governments > Local Governments > Finance
Governments > State & Territorial Governments > Finance
[HN5]Cal. Const. art. XIII B, § 6, provides in part that whenever the legislature or any state agency mandates a new program or higher level of service on any local government, the state shall provide a subvention of funds to reimburse such local government for the costs of such program or increased level of service, except that the legislature may, but need not, provide such subvention of funds for legislative mandates that are enacted prior to January 1, 1975, or executive orders or regulations initially implementing legislation enacted prior to January 1, 1975.

Governments > State & Territorial Governments > Finance
[HN6]Cal. Const. art. XIII B § 6, essentially requires the state to pay for any new governmental programs, or for higher levels of service under existing programs, that it imposes upon local governmental agencies.

Governments > State & Territorial Governments > Finance

[HN7]To determine whether a statute imposes state-mandated costs on a local agency within the meaning of Cal. Const. art. XIII B, § 6, the local agency must file a test claim with the Commission on State Mandates, which, after a public hearing, decides whether the statute mandates a new program or increased level of service. Cal. Gov't Code §§ 17521, 17551, 17555. If the commission finds a claim to be reimbursable, it determines the amount of reimbursement. Cal. Gov't Code § 17557. The local agency then follows certain statutory procedures to obtain reimbursement. Cal. Gov't Code § 17558 et seq.

Civil Procedure > Declaratory Judgment Actions > State Judgments > General Overview
Governments > State & Territorial Governments > Finance

[HN8]If the legislature refuses to appropriate money for a reimbursable mandate, the local agency may file an action in declaratory relief to declare the mandate unenforceable and enjoin its enforcement. Cal. Gov't Code § 17612(c). If the Commission on State Mandates finds no reimbursable mandate, the local agency may challenge this finding by administrative mandate proceedings under Cal. Civ. Proc. Code § 1094.5. Cal. Gov't Code § 17559. Cal. Gov't Code § 17552 declares that these provisions provide the sole and exclusive procedure by which a local agency may claim reimbursement for costs mandated by the state as required by Cal. Const. art. XIII B, § 6.

Constitutional Law > The Judiciary > Case or Controversy > Standing > General Overview

[HN9]Individual taxpayers and recipients of government benefits lack standing to enforce Cal. Const. art. XIII B, § 6, because the applicable administrative procedures, which are the exclusive means for determining and enforcing the state's § 6 obligations, are available only to local agencies and school districts directly affected by a state mandate.

Administrative Law > Judicial Review > Remedies > Mandamus
Civil Procedure > Jurisdiction > Subject Matter Jurisdiction > General Overview
Constitutional Law > The Judiciary > Jurisdiction > General Overview

[HN10]The power of superior courts to perform mandamus review of administrative decisions derives in part from Cal. Const. art. VI, § 10. Section 10 gives the Supreme Court, courts of appeal, and superior courts original jurisdiction in proceedings for extraordinary relief in the nature of mandamus. Cal. Const. art. VI, § 10. The jurisdiction may not lightly be deemed to be destroyed. While the courts are subject to reasonable statutory regulation of procedure and other matters, they maintain their constitutional powers in order effectively to function as a separate department of government. Consequently an intent to defeat the exercise of the court's jurisdiction is not supplied by implication.

Administrative Law > Judicial Review > Reviewability > Jurisdiction & Venue
Civil Procedure > Jurisdiction > Subject Matter Jurisdiction > Jurisdiction Over Actions > General Overview

[HN11]Under Cal. Gov't Code § 17500 et seq., the statutes governing determination of unfunded mandate claims, the court hearing the test claim has primary jurisdiction.

Civil Procedure > Jurisdiction > Subject Matter Jurisdiction > Jurisdiction Over Actions > General Overview

[HN12]A court that refuses to defer to another court's primary jurisdiction is not without jurisdiction.

Administrative Law > Judicial Review > Administrative Record > General Overview
Civil Procedure > Appeals > Reviewability > General Overview

[HN13]The threshold determination of whether a statute imposes a state mandate is an issue of law.

Administrative Law > Judicial Review > Reviewability > Exhaustion of Remedies
Civil Procedure > Justiciability > Exhaustion of Remedies > Administrative Remedies
Governments > Local Governments > Claims By & Against

[HN14]Counties seeking to pursue an unfunded mandate claim under Cal. Const. art. XIII B, § 6, must exhaust their administrative remedies. However, counties may pursue § 6 claims in superior court without first resorting to administrative remedies if they can establish an exception to the exhaustion requirement. The futility exception to the exhaustion requirement applies if a county can state with assurance that the Commission on State Mandates will rule adversely in its own particular case.

Public Health & Welfare Law > Healthcare > General Overview

[HN15] Cal. Welf. & Inst. Code § 17000 creates the residual fund to sustain indigents who cannot qualify under any specialized aid programs. By its express terms, § 17000 requires a county to relieve and support indigent persons only when such persons are not supported and relieved by their relatives or friends, by their own means, or by state hospitals or other state or private institutions. Cal. Welf. & Inst. Code § 17000.

Governments > State & Territorial Governments > Legislatures

Public Health & Welfare Law > Healthcare > General Overview

[HN16]In adopting the California Medical Assistance Program (Medi-Cal), Cal. Welf. & Inst. Code § 14063, the state legislature, for the most part, shifted indigent medical care from being a county responsibility to a state responsibility under the Medi-Cal program.

Governments > Legislation > Effect & Operation > General Overview

[HN17]Cal. Const. art. XIII B, § 6, prohibits the state from shifting to counties the costs of state programs for which the state assumed complete financial responsibility before adoption of § 6.

Governments > Local Governments > Finance

Public Health & Welfare Law > Healthcare > General Overview

[HN18]As amended in 1982, Cal. Welf. & Inst. Code § 16704(c)(1), provides in part that the county board of supervisors shall assure that it will expend Medically Indigent Services Account funds only for the health services specified in Cal. Welf. & Inst. Code §§ 14132 and 14021 provided to persons certified as eligible for such services pursuant to Cal. Welf. & Inst. Code § 17000 and shall assure that it will incur no less in net costs of county funds for county health services in any fiscal year than the amount that is required to obtain the maximum allocation under Cal. Welf. & Inst. Code § 16702.

Governments > Local Governments > Finance

Labor & Employment Law > Disability & Unemployment Insurance > Disability Benefits > Coverage & Definitions > General Overview

Public Health & Welfare Law > Healthcare > Services for Disabled & Elderly Persons > General Overview

[HN19] Cal. Welf. & Inst. Code § 16704(c)(3) provides in part that any person whose income and resources meet the income and resource criteria for certification for services pursuant to Cal. Welf. & Inst. Code § 14005.7 other than for the aged, blind, or disabled, shall not be excluded from eligibility for services to the extent that state funds are provided. Such persons may be held financially liable for these services based upon the person's ability to pay. A county may not establish a payment requirement which will deny medically necessary services. This section shall not be construed to mandate that a county provide any specific level or type of health care service.

Public Health & Welfare Law > Healthcare > General Overview

[HN20]The provisions of Cal. Welf. & Inst. Code § 16704(c)(3) shall become inoperative if a court ruling is issued which decrees that the provisions of this paragraph mandate that additional state funds be provided and which requires that additional state reimbursement be made to counties for costs incurred under this paragraph. This paragraph shall be operative only until June 30, 1983, unless a later enacted statute extends or deletes that date.

Governments > Local Governments > Charters

Public Health & Welfare Law > Healthcare > General Overview

[HN21]See Cal. Welf. & Inst. Code § 17000.

Governments > Local Governments > Duties & Powers

[HN22] Cal. Welf. & Inst. Code § 17001 confers broad discretion upon the counties in performing their statutory duty to provide general assistance benefits to needy residents.

Administrative Law > Agency Rulemaking > General Overview

Governments > Local Governments > Duties & Powers

[HN23]When a statute confers upon a state agency the authority to adopt regulations to implement, interpret, make specific or otherwise carry out its provisions, the agency's regulations must be consistent, not in conflict with the statute, and reasonably necessary to effectuate its purpose. Cal. Gov't Code § 11374.

Administrative Law > Judicial Review > Reviewability > Questions of Law

[HN24]Courts have the final responsibility for the interpretation of the law.

Governments > Local Governments > Duties & Powers
Public Health & Welfare Law > Healthcare > General Overview
[HN25] Cal. Welf. & Inst. Code § 17000 requires counties to relieve and support all indigent persons lawfully resident therein, when such persons are not supported and relieved by their relatives or by some other means.

Governments > Local Governments > Duties & Powers
Public Health & Welfare Law > Healthcare > General Overview
[HN26]Counties have no discretion to refuse to provide medical care to "indigent persons" within the meaning of Cal. Welf. & Inst. Code § 17000 who do not receive it from other sources.

Public Health & Welfare Law > Healthcare > General Overview
[HN27]Adult medically indigent persons are "indigent persons" within the meaning of Cal. Welf. & Inst. Code § 17000 for medical care purposes. Section 17000 requires counties to relieve and support all indigent persons.

Evidence > Inferences & Presumptions > General Overview
Pensions & Benefits Law > Governmental Employees > County Pensions
Public Health & Welfare Law > Social Security > Medicaid > Coverage > General Overview
[HN28]An attorney general's opinion, although not binding, is entitled to considerable weight. Absent controlling authority, it is persuasive because the court presumes that the legislature is cognizant of the attorney general's construction of Cal. Welf. & Inst. Code § 17000 and would have taken corrective action if it disagreed with that construction.

Governments > Local Governments > Duties & Powers
Public Health & Welfare Law > Healthcare > General Overview
[HN29] Cal. Welf. & Inst. Code § 17000 mandates that medical care is provided to indigents and Cal. Welf. & Inst. Code § 10000 requires that such care be provided promptly and humanely. The duty is mandated by statute. There is no discretion concerning whether to provide such care.

Governments > Local Governments > Duties & Powers
Public Health & Welfare Law > Healthcare > General Overview
[HN30] Cal. Welf. & Inst. Code § 17000 imposes a mandatory duty upon all counties to provide medically necessary care, not just emergency care. It further imposes a minimum standard of care below which the provision of medical services may not fall.

Governments > Local Governments > Duties & Powers
Healthcare Law > Insurance > Reimbursement > General Overview
Public Health & Welfare Law > Healthcare > General Overview
[HN31]The former Cal. Health & Safety Code § 1442.5(c) provides that, whether a county's duty to provide care to all indigent people is fulfilled directly by the county or through alternative means, the availability of services, and the quality of the treatment that is received by people who cannot afford to pay for their health care, shall be the same as that available to nonindigent people receiving health care services in private facilities in that county.

Governments > Local Governments > Duties & Powers
Public Health & Welfare Law > Healthcare > General Overview
[HN32]The Supreme Court of California disapproves Cooke v. Superior Court, 261 Cal. Rptr. 706, 213 Cal. App. 3d 401 (1989), to the extent it held that the former Cal. Health & Safety Code § 1442.5(c) was merely a limitation on a county's ability to close facilities or reduce services provided in those facilities, and was irrelevant absent a claim that a county facility was closed or that any services in the county were reduced.

Governments > Local Governments > Duties & Powers
Governments > Local Governments > Finance
Public Health & Welfare Law > Healthcare > General Overview
[HN33]Former Cal. Welf. & Inst. Code § 16990(a) requires counties receiving California Healthcare for the Indigent Program funds, at a minimum, to maintain a level of financial support of county funds for health services at least equal to its county match and any overmatch of county funds in the 1988-89 fiscal year, adjusted annually as provided.

Public Health & Welfare Law > Healthcare > General Overview

[HN34]See former Cal. Welf. & Inst. Code § 16991(a)(5).

Administrative Law > Judicial Review > Remedies > Mandamus
Civil Procedure > Remedies > Writs > General Overview
[HN35]Mandamus pursuant to Cal. Civ. Proc. Code § 1094.5, commonly denominated "administrative" mandamus, is mandamus still. It is not possessed of a separate and distinctive legal personality. It is not a remedy removed from the general law of mandamus or exempted from the latter's established principles, requirements and limitations. The full panoply of rules applicable to "ordinary" mandamus applies to "administrative" mandamus proceedings, except where modified by statute. Where the entitlement to mandamus relief is adequately alleged, a trial court may treat a proceeding brought under Cal. Civ. Proc. Code § 1085 as one brought under Cal. Civ. Proc. Code § 1094.5 and deny a demurrer asserting that the wrong mandamus statute is invoked.

Civil Procedure > Appeals > Standards of Review
[HN36]The determination whether statutes establish a mandate under Cal. Const. art. XIII B, § 6, is a question of law. Where a purely legal question is at issue, the courts exercise independent judgment, no matter whether the issue arises by traditional or administrative mandate.

Civil Procedure > Remedies > Writs > Common Law Writs > Mandamus
[HN37]The denial of a peremptory disqualification motion pursuant to Cal. Civ. Proc. Code § 170.6 is reviewable only by writ of mandate under Cal. Civ. Proc. Code § 170.3(d).

Civil Procedure > Remedies > Injunctions > Preliminary & Temporary Injunctions
Civil Procedure > Appeals > Reviewability > General Overview
[HN38]A preliminary injunction is immediately and separately appealable under Cal. Civ. Proc. Code § 904.1(a)(6).

SUMMARY:

CALIFORNIA OFFICIAL REPORTS SUMMARY

After a county's unsuccessful administrative attempts to obtain reimbursement from the state for expenses incurred through its County Medical Services (CMS) program, and after a class action was filed on behalf of CMS program beneficiaries seeking to enjoin termination of the program, the county filed a cross-complaint and petition for a writ of mandate (Code Civ. Proc., § 1085) against the state, the Commission on State Mandates, and various state officers, to determine the county's rights under Cal. Const., art. XIII B, § 6 (reimbursement to local government for state-mandated new program or higher level of service). The county alleged that the Legislature's 1982 transfer to counties of responsibility for providing health care for medically indigent adults mandated a reimbursable new program. The trial court found that the state had an obligation to fund the county's CMS program. (Superior Court of San Diego County, No. 634931, Michael I. Greer, * Harrison R. Hollywood, and Judith McConnell, Judges.) The Court of Appeal, Fourth Dist., Div. One, No. D018634, affirmed the judgment of the trial court insofar as it provided that Cal. Const., art. XIII B, § 6, required the state to fund the CMS program. The Court of Appeal also affirmed the trial court's finding that the state had required the county to spend at least $ 41 million on the CMS program in fiscal years 1989-1990 and 1990-1991. However, the Court of Appeal reversed those portions of the judgment determining the final reimbursement amount and specifying the state funds from which the state was to satisfy the judgment. The Court of Appeal remanded to the commission to determine the reimbursement amount and appropriate statutory remedies.

* Retired judge of the San Diego Superior Court, assigned by the Chief Justice pursuant to article VI, section 6 of the California Constitution.

The Supreme Court affirmed the judgment of the Court of Appeal insofar as it held that the exclusion of medically indigent adults from Medi-Cal imposed a mandate on the county within the meaning of Cal. Const., art. XIII B, § 6. The Supreme Court reversed the judgment insofar as it held that the state required the county to spend at least $ 41 million on the CMS program in fiscal years 1989-1990 and 1990-1991, and remanded the matter to the commission to determine whether, and by what amount, the statutory standards of care (e.g., Health & Saf. Code, § 1442.5, former subd. (c), Welf. & Inst. Code, §§ 10000, 17000) forced the county to incur costs in excess of the funds provided by the state, and to determine the statutory remedies to which the county was entitled. The court held that the trial court had jurisdiction to adjudicate the county's mandate claim, notwithstanding that a test claim was pending in an action by a different county. The trial court should not have proceeded while the other action was pending, since one purpose of the test claim procedure is to avoid multiple proceedings addressing the same claim. However, the error was not jurisdictional; the governing

statutes simply vest primary jurisdiction in the court hearing the test claim. The court also held that the Legislature's 1982 transfer to counties of responsibility for providing health care for medically indigent adults mandated a reimbursable new program. The state asserted the source of the county's obligation to provide such care was Welf. & Inst. Code, § 17000, enacted in 1965, rather than the 1982 legislation, and since Cal. Const., art. XIII B, § 6, did not apply to "mandates enacted prior to January 1, 1975," there was no reimbursable mandate. However, Welf. & Inst. Code, § 17000, requires a county to support indigent persons only in the event they are not assisted by other sources. The court further held that there was a reimbursable new program, despite the state's assertion that the county had discretion to refuse to provide the medical care. While Welf. & Inst. Code, § 17001, confers discretion on counties to provide general assistance, there are limits to this discretion. The standards must meet the objectives of Welf. & Inst. Code, § 17000, or be struck down as void by the courts. The court also held that the Court of Appeal, in reversing the damages portion of the trial court's judgment and remanding to the commission to determine the amount of any reimbursement due, erred in finding the county had a minimum required expenditure on its CMS program. (Opinion by Chin, J., with George, C. J., Mosk, and Baxter, JJ., Anderson, J., ** and Aldrich, J., + concurring. Dissenting opinion by Kennard, J.)

** Presiding Justice, Court of Appeal, First Appellate District, Division Four, assigned by the Chief Justice pursuant to article VI, section 6 of the California Constitution.

+ Associate Justice, Court of Appeal, Second Appellate District, Division Three, assigned by the Chief Justice pursuant to article VI, section 6 of the California Constitution.

HEADNOTES

CALIFORNIA OFFICIAL REPORTS HEADNOTES
Classified to California Digest of Official Reports

(1) **State of California § 12--Fiscal Matters--Appropriations--Reimbursement to Local Government for State-mandated Program.** --Cal. Const., art. XIII A, and art. XIII B, work in tandem, together restricting California governments' power both to levy and to spend for public purposes. Their goals are to protect residents from excessive taxation and government spending. The purpose of Cal. Const., art. XIII B, § 6 (reimbursement to local government for state-mandated new program or higher level of service), is to preclude the state from shifting financial responsibility for carrying out governmental functions to local agencies, which are ill equipped to assume increased financial responsibilities because of the taxing and spending limitations that Cal. Const., arts. XIII A and XIII B, impose. With certain exceptions, Cal. Const., art. XIII B, § 6, essentially requires the state to pay for any new governmental programs, or for higher levels of service under existing programs, that it imposes upon local governmental agencies.

(2a) (2b) State of California § 12--Fiscal Matters--Appropriations--Reimbursement to Local Government for State-mandated Program--County's Reimbursement for Cost of Health Care to Indigent Adults--Jurisdiction--With Pending Test Claim. --The trial court had jurisdiction to adjudicate a county's mandate claim asserting the Legislature's transfer to counties of the responsibility for providing health care for medically indigent adults constituted a new program or higher level of service that required state funding under Cal. Const., art. XIII B, § 6 (reimbursement to local government for costs of new state-mandated program), notwithstanding that a test claim was pending in an action by a different county. The trial court should not have proceeded while the other action was pending, since one purpose of the test claim procedure is to avoid multiple proceedings addressing the same claim. However, the error was not jurisdictional; the governing statutes simply vest primary jurisdiction in the court hearing the test claim. The trial court's failure to defer to the primary jurisdiction of the other court did not prejudice the state. The trial court did not usurp the Commission on State Mandates' authority, since the commission had exercised its authority in the pending action. Since the pending action was settled, no multiple decisions resulted. Nor did lack of an administrative record prejudice the state, since determining whether a statute imposes a state mandate is an issue of law. Also, attempts to seek relief from the commission would have been futile, thus triggering the futility exception to the exhaustion requirement, given that the commission rejected the other county's claim.

(3) **Administrative Law § 99--Judicial Review and Relief--Administrative Mandamus--Jurisdiction--As Derived From Constitution.** --The power of superior courts to perform mandamus review of administrative decisions derives in part from Cal. Const., art. VI, § 10. That section gives the Supreme Court, Courts of Appeal, and superior courts "original jurisdiction in proceedings for extraordinary relief in the nature of mandamus." The jurisdiction thus vested may not lightly be deemed to have been destroyed. While the courts are subject to reasonable statutory regulation of procedure and other matters, they will maintain their constitutional powers in

order effectively to function as a separate department of government. Consequently an intent to defeat the exercise of the court's jurisdiction will not be supplied by implication.

(4) State of California § 12--Fiscal Matters--Appropriations--Reimbursement to Local Government for State-mandated Program--County's Reimbursement for Cost of Health Care to Indigent Adults--Existence of Mandate. --In a county's action against the state to determine the county's rights under Cal. Const., art. XIII B, § 6 (reimbursement to local government for state-mandated new program or higher level of service), the Legislature's 1982 transfer to counties of responsibility for providing health care for medically indigent adults mandated a reimbursable new program. The state asserted the source of the county's obligation to provide such care was Welf. & Inst. Code, § 17000, enacted in 1965, rather than the 1982 legislation, and since Cal. Const., art. XIII B, § 6, did not apply to "mandates enacted prior to January 1, 1975," there was no reimbursable mandate. However, Welf. & Inst. Code, § 17000, requires a county to support indigent persons only in the event they are not assisted by other sources. To the extent care was provided prior to the 1982 legislation, the county's obligation had been reduced. Also, the state's assumption of full funding responsibility prior to the 1982 legislation was not intended to be temporary. The 1978 legislation that assumed funding responsibility was limited to one year, but similar legislation in 1979 contained no such limiting language. Although the state asserted the health care program was never operated by the state, the Legislature, in adopting Medi-Cal, shifted responsibility for indigent medical care from counties to the state. Medi-Cal permitted county boards of supervisors to prescribe rules (Welf. & Inst. Code, § 14000.2), and Medi-Cal was administered by state departments and agencies.

[See 9 Witkin, Summary of Cal. Law (9th ed. 1989) Taxation, § 123.]

(5a) (5b) State of California § 12--Fiscal Matters--Appropriations--Reimbursement to Local Government for State-mandated Program--County's Reimbursement for Cost of Health Care to Indigent Adults--Existence of Mandate--Discretion to Set Standards--Eligibility. --In a county's action against the state to determine the county's rights under Cal. Const., art. XIII B, § 6 (reimbursement to local government for state-mandated new program or higher level of service), the Legislature's 1982 transfer to counties of responsibility for providing health care for medically indigent adults mandated a reimbursable new program, despite the state's assertion that the county had discretion to refuse to provide such care. While Welf. & Inst. Code, § 17001, confers discretion on counties to provide general assistance, there are limits to this discretion. The standards must meet the objectives of Welf. & Inst. Code, § 17000 (counties shall relieve and support "indigent persons"), or be struck down as void by the courts. As to eligibility standards, counties must provide care to all adult medically indigent persons (MIP's). Although Welf. & Inst. Code, § 17000, does not define "indigent persons," the 1982 legislation made clear that adult MIP's were within this category. The coverage history of Medi-Cal demonstrates the Legislature has always viewed all adult MIP's as "indigent persons" under Welf. & Inst. Code, § 17000. The Attorney General also opined that the 1971 inclusion of MIP's in Medi-Cal did not alter the duty of counties to provide care to indigents not eligible for Medi-Cal, and this opinion was entitled to considerable weight. Absent controlling authority, the opinion was persuasive since it was presumed the Legislature was cognizant of the Attorney General's construction and would have taken corrective action if it disagreed. (Disapproving *Bay General Community Hospital* v. *County of San Diego* (1984) 156 Cal.App.3d 944 [203 Cal.Rptr. 184] insofar as it holds that a county's responsibility under Welf. & Inst. Code, § 17000, extends only to indigents as defined by the county's board of supervisors, and suggests that a county may refuse to provide medical care to persons who are "indigent" within the meaning of Welf. & Inst. Code, § 17000, but do not qualify for Medi-Cal.)

(6) Public Aid and Welfare § 4--County Assistance--Counties' Discretion. --Counties may exercise their discretion under Welf. & Inst. Code, § 17001 (county board of supervisors or authorized agency shall adopt standards of aid and care for indigent and dependent poor), only within fixed boundaries. In administering General Assistance relief the county acts as an agent of the state. When a statute confers upon a state agency the authority to adopt regulations to implement, interpret, make specific or otherwise carry out its provisions, the agency's regulations must be consistent, not in conflict with the statute, and reasonably necessary to effectuate its purpose (Gov. Code, § 11374). Despite the counties' statutory discretion, courts have consistently invalidated county welfare regulations that fail to meet statutory requirements.

(7) State of California § 12--Fiscal Matters--Appropriations--Reimbursement to Local Government for State-mandated Program--County's Reimbursement for Cost of Health Care to Indigent Adults--Existence of Mandate--Discretion to Set Standards--Service. --In a county's action against the state to determine the county's rights under Cal. Const., art. XIII B, § 6 (reimbursement to local government for

state-mandated new program or higher level of service), the Legislature's 1982 transfer to counties of responsibility for providing health care for medically indigent adults mandated a reimbursable new program, despite the state's assertion that the county had discretion to refuse to provide such care by setting its own service standards. Welf. & Inst. Code, § 17000, mandates that medical care be provided to indigents, and Welf. & Inst. Code, § 10000, requires that such care be provided promptly and humanely. There is no discretion concerning whether to provide such care. Courts construing Welf. & Inst. Code, § 17000, have held it imposes a mandatory duty upon counties to provide medically necessary care, not just emergency care, and it has been interpreted to impose a minimum standard of care. Until its repeal in 1992, Health & Saf. Code, § 1442.5, former subd. (c), also spoke to the level of services that counties had to provide under Welf. & Inst. Code, § 17000, requiring that the availability and quality of services provided to indigents directly by the county or alternatively be the same as that available to nonindigents in private facilities in that county. (Disapproving *Cooke v. Superior Court* (1989) 213 Cal.App.3d 401 [261 Cal.Rptr. 706] to the extent it held that Health & Saf. Code, § 1442.5, former subd. (c), was merely a limitation on a county's ability to close facilities or reduce services provided in those facilities, and was irrelevant absent a claim that a county facility was closed or that services in the county were reduced.)

(8) State of California § 12--Fiscal Matters--Appropriations--Reimbursement to Local Government for State-mandated Program--County's Reimbursement for Cost of Health Care to Indigent Adults--Minimum Required Expenditure. --In a county's action against the state to determine the county's rights under Cal. Const., art. XIII B, § 6 (reimbursement to local government for state-mandated new program or higher level of service), in which the trial court found that the Legislature's 1982 transfer to counties of the responsibility for providing health care for medically indigent adults mandated a reimbursable new program entitling the county to reimbursement, the Court of Appeal, in reversing the damages portion of the trial court's judgment and remanding to the Commission on State Mandates to determine the amount of any reimbursement due, erred in finding the county had a minimum required expenditure on its County Medical Services (CMS) program. The Court of Appeal relied on Welf. & Inst. Code, former § 16990, subd. (a), which set forth the financial maintenance-of-effort requirement for counties that received California Healthcare for the Indigent Program (CHIP) funding. However, counties that chose to seek CHIP funds did so voluntarily. Thus, Welf. & Inst. Code, former § 16990, subd. (a), did not mandate a minimum funding requirement. Nor did Welf. & Inst. Code, former § 16991, subd. (a)(5), establish a minimum financial obligation. That statute required the state, for fiscal years 1989-1990 and 1990-1991, to reimburse a county if its allocation from various sources was less than the funding it received under Welf. & Inst. Code, § 16703, for 1988-1989. Nothing about this requirement imposed on the county a minimum funding requirement.

(9) State of California § 12--Fiscal Matters--Appropriations--Reimbursement to Local Government for State-mandated Program--County's Reimbursement for Cost of Health Care to Indigent Adults--Proper Mandamus Proceeding: Mandamus and Prohibition § 23--Claim Against Commission on State Mandates. --In a county's action against the state to determine the county's rights under Cal. Const., art. XIII B, § 6 (reimbursement to local government for state-mandated new program or higher level of service), after the Commission on State Mandates indicated the Legislature's 1982 transfer to counties of the responsibility for providing health care for medically indigent adults did not mandate a reimbursable new program, a mandamus proceeding under Code Civ. Proc., § 1085, was not an improper vehicle for challenging the commission's position. Mandamus under Code Civ. Proc., § 1094.5, commonly denominated "administrative" mandamus, is mandamus still. The full panoply of rules applicable to ordinary mandamus applies to administrative mandamus proceedings, except where they are modified by statute. Where entitlement to mandamus relief is adequately alleged, a trial court may treat a proceeding under Code Civ. Proc., § 1085, as one brought under Code Civ. Proc., § 1094.5, and should overrule a demurrer asserting that the wrong mandamus statute has been invoked. In any event, the determination whether the statutes at issue established a mandate under Cal. Const., art. XIII B, § 6, was a question of law. Where a purely legal question is at issue, courts exercise independent judgment, no matter whether the issue arises by traditional or administrative mandate.

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Lloyd M. Harmon, Jr., County Counsel, John J. Sansone, Acting County Counsel, Diane Bardsley, Chief Deputy County Counsel, Valerie Tehan and Ian Fan, Deputy County Counsel, for Cross-complainant and Respondent.

JUDGES: Opinion by Chin, J., with George, C. J., Mosk, and Baxter, JJ., Anderson, J., * and Aldrich, J., ** concurring. Dissenting opinion by Kennard, J.

* Presiding Justice, Court of Appeal, First Appellate District, Division Four, assigned by the Chief Justice pursuant to article VI, section 6 of the California Constitution.

** Associate Justice, Court of Appeal, Second Appellate District, Division Three, assigned by the Chief Justice pursuant to article VI, section 6 of the California Constitution.

OPINION BY: CHIN

OPINION

[*75] [**314] [***136] **CHIN, J.**

Section 6 of article XIII B of the California Constitution (section 6) requires the State of California (state), subject to certain exceptions, to "provide a subvention of funds to reimburse" local governments "[w]henever the Legislature or any state agency mandates a new program or higher level of service . . . ." In this action, the County of San Diego (San Diego or the County) seeks reimbursement under section 6 from the state for the costs of providing health care services to certain adults who formerly received medical care under the California Medical Assistance Program (Medi-Cal) (see Welf. & Inst. Code, [**315] [***137] § 14063) [1] because they were medically indigent, i.e., they had insufficient financial resources to pay for their own medical care. In 1979, when the electorate adopted section 6, the state provided Medi-Cal coverage to these medically indigent adults without requiring financial contributions from counties. Effective January 1, 1983, the Legislature excluded this population from Medi-Cal. (Stats. 1982, ch. 328, § 6, 8.3, 8.5, pp. 1574-1576; Stats. 1982, ch. 1594, § 19, 86, pp. 6315, 6357.) Since that date, San Diego has provided medical care to these individuals with varying levels of state financial assistance.

1 Except as otherwise indicated, all further statutory references are to the Welfare and Institutions Code.

To resolve San Diego's claim, we must determine whether the Legislature's exclusion of medically indigent adults from Medi-Cal "mandate[d] a new program or higher level of service" on San Diego within the meaning of section 6. The Commission on State Mandates (Commission), which the Legislature created to determine claims under section 6, has ruled that section 6 does not apply to the Legislature's action and has rejected reimbursement claims like San Diego's. (See *Kinlaw v. State of California* (1991) 54 Cal. 3d 326, 330, fn. 2 [285 Cal. Rptr. 66, 814 P.2d 1308] (*Kinlaw*).) The trial court and Court of Appeal in this case disagreed with the Commission, finding that San Diego was entitled to reimbursement. The state seeks [*76] reversal of this finding. It also argues that San Diego's failure to follow statutory procedures deprived the courts of jurisdiction to hear its claim. We reject the state's jurisdictional argument and affirm the finding that the Legislature's exclusion of medically indigent adults from Medi-Cal "mandate[d] a new program or higher level of service" within the meaning of section 6. Accordingly, we remand the matter to the Commission to determine the amount of reimbursement, if any, due San Diego under the governing statutes.

I. FUNDING OF INDIGENT MEDICAL CARE

Before the start of Medi-Cal, "the indigent in California were provided health care services through a variety of different programs and institutions." (Assem. Com. on Public Health, Preliminary Rep. on Medi-Cal (Feb. 29, 1968) p. 3 (Preliminary Report).) County hospitals "provided a wide range of inpatient and outpatient hospital services to all persons who met county indigency requirements whether or not they were public assistance recipients. The major responsibility for supporting county hospitals rested upon the counties, financed primarily through property taxes, with minor contributions from" other sources. (*Id.* at p. 4.)

[HN1]Medi-Cal, which began operating March 1, 1966, established "a program of basic and extended health care services for recipients of public assistance and for medically indigent persons." (*Morris v. Williams* (1967) 67 Cal. 2d 733, 738 [63 Cal. Rptr. 689, 433 P.2d 697] (*Morris*); *id.* at p. 740; see also Stats. 1966, Second Ex. Sess. 1965, ch. 4, § 2, p. 103.) It "represent[ed] California's implementation of the federal Medicaid program (42 U.S.C. § 1396-1396v), through which the federal government provide[d] financial assistance to states so that they [might] furnish medical care to qualified indigent persons. [Citation.]" (*Robert F. Kennedy Medical Center v. Belsh* (1996) 13 Cal. 4th 748, 751 [55 Cal. Rptr. 2d 107, 919 P.2d 721] (*Belsh*).) "[B]y meeting the requirements of federal law," Medi-Cal "qualif[ied] California for the receipt of federal funds made available under title XIX of the Social Security Act." (*Morris, supra*, 67 Cal. 2d at p. 738.) "Title [XIX] permitted the combination of the major governmental health care systems which provided care for the indigent into a single system financed by the state and federal governments. By 1975, this system, at least as originally proposed, would provide a wide range of health care services for all those who [were] indigent regardless of whether they [were] public assistance recipients . . . ." (Preliminary Rep., *supra*, at p. 4; see also Act of July 30, 1965, Pub.L. No. 89-97, § 121(a), 79 Stat. 286, reprinted in 1965 U.S. Code [*77] Cong. & Admin. News, p. 378 [states must make effort to [**316] [***138] liberalize

eligibility requirements "with a view toward furnishing by July 1, 1975, comprehensive care and services to substantially all individuals who meet the plan's eligibility standards with respect to income and resources"].) [2]

2 Congress later repealed the requirement that states work towards expanding eligibility. (See Cal. Health and Welfare Agency, The Medi-Cal Program: A Brief Summary of Major Events (Mar. 1990) p. 1 (Summary of Major Events).)

However, eligibility for Medi-Cal was initially limited only to persons linked to a federal categorical aid program by age (at least 65), blindness, disability, or membership in a family with dependent children within the meaning of the Aid to Families with Dependent Children program (AFDC). (See Legis. Analyst, Rep. to Joint Legis. Budget Com., Analysis of 1971-1972 Budget Bill, Sen. Bill No. 207 (1971 Reg. Sess.) pp. 548, 550 (1971 Legislative Analyst's Report).) Individuals possessing one of these characteristics (categorically linked persons) received full benefits if they actually received public assistance payments. (*Id.* at p. 550.) Lesser benefits were available to categorically linked persons who were only medically indigent, i.e., their income and resources, although rendering them ineligible for cash aid, were "not sufficient to meet the cost of health care." (*Morris, supra*, 67 Cal. 2d at p. 750; see also 1971 Legis. Analyst's Rep., *supra*, at pp. 548, 550; Stats. 1966, Second Ex. Sess. 1965, ch. 4, § 2, pp. 105-106.)

Individuals not linked to a federal categorical aid program (non-categorically linked persons) were ineligible for Medi-Cal, regardless of their means. Thus, "a group of citizens, not covered by Medi-Cal and yet unable to afford medical care, remained the responsibility of" the counties. (*County of Santa Clara v. Hall* (1972) 23 Cal. App. 3d 1059, 1061 [100 Cal. Rptr. 629] (*Hall*).) In establishing Medi-Cal, the Legislature expressly recognized this fact by enacting former section 14108.5, which provided: "The Legislature hereby declares its concern with the problems which will be facing the counties with respect to the medical care of indigent persons who are not covered [by Medi-Cal] . . . and . . . whose medical care must be financed entirely by the counties in a time of heavily increasing medical costs." (Stats. 1966, Second Ex. Sess. 1965, ch. 4, § 2, p. 116.) The Legislature directed the Health Review and Program Council "to study this problem and report its findings to the Legislature no later than March 1, 1967." (*Ibid.*)

Moreover, although it required counties to contribute to the costs of Medi-Cal, the Legislature established a method for determining the amount of their contributions that would "leave them with []sufficient funds to provide hospital care for those persons not eligible for Medi-Cal." (*Hall, supra*, 23 Cal. App. 3d at p. 1061, fn. omitted.) Former section 14150.1, [*78] which was known as the "county option" or the "option plan," required a county "to pay the state a sum equal to 100 percent of the county's health care costs (which included both linked and nonlinked individuals) provided in the 1964-1965 fiscal year, with an adjustment for population increase; in return the state would pay the county's entire cost of medical care." [3] (*County of Sacramento v. Lackner* (1979) 97 Cal. App. 3d 576, 581 [159 Cal. Rptr. 1] (*Lackner*).) Under the county option, "the state agreed to assume all county health care costs . . . in excess of" the county's payment. (*Id.* at p. 586.) It "made no distinction between 'linked' and 'nonlinked' persons," and "simply guaranteed a medical cost ceiling to counties electing to come within the option plan." (*Ibid.*) "Any difference [**317] [***139] in actual operating costs and the limit set by the option provision [was] assumed entirely by the state." (Preliminary Rep., *supra*, at p. 10, fn. 2.) Thus, the county option "guarantee[d] state participation in the cost of care for medically indigent persons who [were] not otherwise covered by the basic Medi-Cal program or other repayment programs." [4] (1971 Legis. Analyst's Rep., *supra*, at p. 549.)

3 [HN2]Former section 14150.1 provided in relevant part: "[A] county may elect to pay as its share [of Medi-Cal costs] one hundred percent . . . of the county cost of health care uncompensated from any source in 1964-65 for all categorical aid recipients, and all other persons in the county hospital or in a contract hospital, increased for such county for each fiscal year subsequent to 1964-65 by an amount proportionate to the increase in population for such county . . . . If the county so elects, the county costs of health care in any fiscal year shall not exceed the total county costs of health care uncompensated from any source in 1964-65 for all categorical aid recipients, and all other persons in the county hospital or in a contract hospital, increased for such county for each fiscal year subsequent to 1964-65 by an amount proportionate to the increase in population for such county . . . ." (Stats. 1966, Second Ex. Sess. 1965, ch. 4, § 2, p. 121.)

4 [HN3]Former section 14150 provided the standard method for determining the counties' share of Medi-Cal costs. Under it, "a county was required to pay the state a specific sum, in return for which the state would pay for the medical care of all [categorically linked] individuals . . . . Financial responsibility for nonlinked individuals . . . remained with the counties." (*Lackner, supra*, 97 Cal. App. 3d at p. 581.)

Primarily through the county option, Medi-Cal caused a "significant shift in financing of health care

from the counties to the state and federal government. . . . During the first 28 months of the program the state . . . paid approximately $ 76 million for care of non-Medi-Cal indigents in county hospitals." (Preliminary Rep., *supra*, at p. 31.) These state funds paid "costs that would otherwise have been borne by counties through increases in property taxes." (Legis. Analyst, Rep. to Joint Legis. Budget Com., Analysis of 1974-1975 Budget Bill, Sen. Bill No. 1525 (1973-1974 Reg. Sess.) p. 626 (1974 Legislative Analyst's Report).) "[F]aced with escalating Medi-Cal costs, the Legislature in 1967 imposed strict guidelines on reimbursing counties electing to come under the 'option' plan. ([Former] § 14150.2.) Pursuant to subdivision (c) of [former] section 14150.2, the state imposed a limit on its obligation to pay for medical services to nonlinked persons [*79] served by a county within the 'option' plan." (*Lackner, supra*, 97 Cal. App. 3d at p. 589; see also Stats. 1967, ch. 104, § 3, p. 1019; Stats. 1969, ch. 21, § 57, pp. 106-107; 1974 Legis. Analyst's Rep., *supra*, at p. 626.)

In 1971, the Legislature substantially revised Medi-Cal. It extended coverage to certain noncategorically linked minors and adults "who [were] financially unable to pay for their medical care." (Legis. Counsel's Dig., Assem. Bill No. 949, 3 Stats. 1971 (Reg. Sess.) Summary Dig., p. 83; see Stats. 1971, ch. 577, § 12, 23, pp. 1110-1111, 1115.) These medically indigent individuals met "the income and resource requirements for aid under [AFDC] but [did] not otherwise qualify[] as a public assistance recipient." (56 Ops.Cal.Atty.Gen. 568, 569 (1973).) The Legislature anticipated that this eligibility expansion would bring "approximately 800,000 additional medically needy Californians" into Medi-Cal. (Stats. 1971, ch. 577, § 56, p. 1136.) The 1971 legislation referred to these individuals as " '[n]oncategorically related needy person[s].' " (Stats. 1971, ch. 577, § 23, p. 1115.) Subsequent legislation designated them as "medically indigent person[s]" (MIP's) and provided them coverage under former section 14005.4. (Stats. 1976, ch. 126, § 7, p. 200; *id.* at § 20, p. 204.)

The 1971 legislation also established a new method for determining each county's financial contribution to Medi-Cal. The Legislature eliminated the county option by repealing former section 14150.1 and enacting former section 14150. That section specified (by amount) each county's share of Medi-Cal costs for the 1972-1973 fiscal year and set forth a formula for increasing the share in subsequent years based on the taxable assessed value of certain property. (Stats. 1971, ch. 577, § 41, 42, pp. 1131-1133.)

For the 1978-1979 fiscal year, the state assumed each county's share of Medi-Cal costs under former section 14150. (Stats. 1978, ch. 292, § 33, p. 610.) In July 1979, the Legislature repealed former section 14150 altogether, thereby eliminating the counties' responsibility to share in Medi-Cal costs. (Stats. 1979, ch. 282, § 74, p. 1043.) Thus, in November 1979, when the electorate adopted section 6, "the state was funding Medi-Cal coverage for [MIP's] without requiring any county financial contribution." (*Kinlaw, supra*, 54 Cal. 3d at p. 329.) The state continued to provide full funding for MIP medical care through 1982.

In 1982, the Legislature passed two Medi-Cal reform bills that, as of January 1, 1983, excluded from Medi-Cal most adults who had been eligible [*80] under the MIP category [***140] (adult [**318] MIP's or Medically Indigent Adults). [5] (Stats. 1982, ch. 328, § 6, 8.3, 8.5, pp. 1574-1576; Stats. 1982, ch. 1594, § 19, 86, pp. 6315, 6357; *Cooke v. Superior Court* (1989) 213 Cal. App. 3d 401, 411 [261 Cal. Rptr. 706] (*Cooke*).) As part of excluding this population from Medi-Cal, the Legislature created the Medically Indigent Services Account (MISA) as a mechanism for "transfer[ing] [state] funds to the counties for the provision of health care services." (Stats. 1982, ch. 1594, § 86, p. 6357.) Through MISA, the state annually allocated funds to counties based on "the average amount expended" during the previous three fiscal years on Medi-Cal services for county residents who had been eligible as MIP's. (Stats. 1982, ch. 1594, § 69, p. 6345.) The Legislature directed that MISA funds "be consolidated with existing county health services funds in order to provide health services to low-income persons and other persons not eligible for the Medi-Cal program." (Stats. 1982, ch. 1594, § 86, p. 6357.) It further provided: "Any person whose income and resources meet the income and resource criteria for certification for [Medi-Cal] services pursuant to Section 14005.7 other than for the aged, blind, or disabled, shall not be excluded from eligibility for services to the extent that state funds are provided." (Stats. 1982, ch. 1594, § 70, p. 6346.)

> 5 In this opinion, the terms "adult MIP's" and "Medically Indigent Adults" refer only to those persons who were excluded from the Medi-Cal program by the 1982 legislation.

After passage of the 1982 legislation, San Diego established a county medical services (CMS) program to provide medical care to adult MIP's. According to San Diego, between 1983 and June 1989, the state fully funded San Diego's CMS program through MISA. However, for fiscal years 1989-1990 and 1990-1991, the state only partially funded San Diego's CMS program. For example, San Diego asserts that, in fiscal year 1990-1991, it exhausted state-provided MISA funds by December 24, 1990. Faced with this shortfall, San Diego's board of supervisors voted in February 1991 to

terminate the CMS program unless the state agreed by March 8 to provide full funding for the 1990-1991 fiscal year. After the state refused to provide additional funding, San Diego notified affected individuals and medical service providers that it would terminate the CMS program at midnight on March 19, 1991. The response to the County's notification ultimately resulted in the unfunded mandate claim now before us.

II. UNFUNDED MANDATES

Through adoption of Proposition 13 in 1978, the voters [HN4]added article XIII A to the California Constitution, which "imposes a limit on the power of state and local governments to adopt and levy taxes. [Citation.]" (*County of Fresno v. State of California* (1991) 53 Cal. 3d 482, 486 [280 Cal. Rptr. 92, [*81] 808 P.2d 235] (*County of Fresno*).) The next year, the voters added article XIII B to the Constitution, which "impose[s] a complementary limit on the rate of growth in governmental spending." (*San Francisco Taxpayers Assn. v. Board of Supervisors* (1992) 2 Cal. 4th 571, 574 [7 Cal. Rptr. 2d 245, 828 P.2d 147].) **(1)** These two constitutional articles "work in tandem, together restricting California governments' power both to levy and to spend for public purposes." (*City of Sacramento v. State of California* (1990) 50 Cal. 3d 51, 59, fn. 1 [266 Cal. Rptr. 139, 785 P.2d 522].) Their goals are "to protect residents from excessive taxation and government spending. [Citation.]" (*County of Los Angeles v. State of California* (1987) 43 Cal. 3d 46, 61 [233 Cal. Rptr. 38, 729 P.2d 202] (*County of Los Angeles*).)

[HN5]Article XIII B of the California Constitution includes section 6, which is the constitutional provision at issue here. It provides in relevant part: "Whenever the Legislature or any state agency mandates a new program or higher level of service on any local government, the state shall provide a subvention of funds to reimburse such local government for the costs of such program or increased level of service, except that the Legislature may, but need not, provide such subvention of funds for the following mandates: [P] . . . [P] (c) Legislative mandates enacted prior to January 1, 1975, or executive orders or regulations initially implementing legislation enacted prior to January 1, 1975." Section 6 [**319] [***141] recognizes that articles XIII A and XIII B severely restrict the taxing and spending powers of local governments. (*County of Fresno, supra*, 53 Cal. 3d at p. 487.) Its purpose is to preclude the state from shifting financial responsibility for carrying out governmental functions to local agencies, which are "ill equipped" to assume increased financial responsibilities because of the taxing and spending limitations that articles XIII A and XIII B impose. (*County of Fresno, supra*, 53 Cal. 3d at p. 487; *County of Los Angeles, supra*, 43 Cal. 3d at p. 61.) With certain exceptions, [HN6]section 6 "[e]ssentially" requires the state "to pay for any new governmental programs, or for higher levels of service under existing programs, that it imposes upon local governmental agencies. [Citation.]" (*Hayes v. Commission on State Mandates* (1992) 11 Cal. App. 4th 1564, 1577 [15 Cal. Rptr. 2d 547].)

In 1984, the Legislature created a statutory procedure for [HN7]determining whether a statute imposes state-mandated costs on a local agency within the meaning of section 6. (Gov. Code, § 17500 et seq.). The local agency must file a test claim with the Commission, which, after a public hearing, decides whether the statute mandates a new program or increased level of service. (Gov. Code, § 17521, 17551, 17555.) If the Commission finds a claim to be reimbursable, it must determine the amount of reimbursement. (Gov. Code, § 17557.) The local agency must then follow certain statutory procedures to [*82] obtain reimbursement. (Gov. Code, § 17558 et seq.) [HN8]If the Legislature refuses to appropriate money for a reimbursable mandate, the local agency may file "an action in declaratory relief to declare the mandate unenforceable and enjoin its enforcement." (Gov. Code, § 17612, subd. (c).) If the Commission finds no reimbursable mandate, the local agency may challenge this finding by administrative mandate proceedings under section 1094.5 of the Code of Civil Procedure. (Gov. Code, § 17559.) Government Code section 17552 declares that these provisions "provide the sole and exclusive procedure by which a local agency . . . may claim reimbursement for costs mandated by the state as required by Section 6 . . . ."

III. ADMINISTRATIVE AND JUDICIAL PROCEEDINGS

A. *The Los Angeles Action*

On November 23, 1987, the County of Los Angeles (Los Angeles) filed a claim (the Los Angeles action) with the Commission asserting that the exclusion of adult MIP's from Medi-Cal constituted a reimbursable mandate under section 6. (*Kinlaw, supra*, 54 Cal. 3d at p. 330, fn. 2.) Alameda County subsequently filed a claim on November 30, 1987, but the Commission rejected it because of the pending Los Angeles claim. (*Id.* at p. 331, fn. 4.) Los Angeles refused to permit Alameda County to join as a claimant, but permitted San Bernardino County to join. (*Ibid.*)

In April 1989, the Commission rejected the Los Angeles claim, finding no reimbursable mandate. [6] (*Kinlaw, supra*, 54 Cal. 3d at p. 330, fn. 2.) It found that the 1982 legislation did not impose on counties a new program or a higher level of service for an existing program because counties had a "pre-existing duty" to pro-

vide medical care to the medically indigent under section 17000. That section provides in relevant part: "Every county . . . shall relieve and support all incompetent, poor, indigent persons . . . lawfully resident therein, when such persons are not supported and relieved by their relatives or friends, by their own means, or by state hospitals or other state or private institutions." Section 17000 did not impose a reimbursable mandate under section 6, the Commission further reasoned, because it "was enacted prior to January 1, 1975 . . . ." Finally, the Commission found no mandate because the 1982 legislation "neither establish[ed] the level of care to be provided nor . . . define[d] the class of persons determined to be eligible for medical care since these criteria were established by boards of supervisors" pursuant to section 17001.

6 San Diego lodged with the trial court a copy of the Commission's decision in the Los Angeles action.

[**320] [***142] On March 20, 1990, the Los Angeles Superior Court filed a judgment reversing the Commission's decision and directing issuance of a peremptory [*83] writ of mandate. On April 16, 1990, the Commission and the state filed an appeal in the Second District Court of Appeal. (*County of Los Angeles v. State of California*, No. B049625.) [7] In early 1992, the parties to the Los Angeles action agreed to settle their dispute and to seek dismissal. In April 1992, after learning of this agreement, San Diego sought to intervene. Explaining that it had been waiting for resolution of the action, San Diego requested that the Court of Appeal deny the dismissal request and add (or substitute in) the County as a party. The Court of Appeal did not respond. On December 15, 1992, the parties to the Los Angeles action entered into a settlement agreement that provided for vacation of the superior court judgment and dismissal of the appeal and superior court action. Consistent with the settlement agreement, on December 29, 1992, the Court of Appeal filed an order vacating the superior court judgment, dismissing the appeal, and instructing the superior court to dismiss the action without prejudice on remand. [8]

7 In setting forth the facts relating to the Los Angeles action, we rely in part on the appellate record from that action, of which we take judicial notice. (Evid. Code, § 452, subd. (d), 459.)

8 The settlement resulted from 1991 legislation that changed the system of health care funding as of June 30, 1991. (See § 17600 et seq.; Stats. 1991, chs. 87, 89, pp. 231-235, 243-341.) That legislation provided counties with new revenue sources, including a portion of state vehicle license fees, to fund health care programs. However, the legislation declared that the statutes providing counties with vehicle license fees would "cease to be operative on the first day of the month following the month in which the Department of Motor Vehicles is notified by the Department of Finance of a final judicial determination by the California Supreme Court or any California court of appeal" that "[t]he state is obligated to reimburse counties for costs of providing medical services to medically indigent adults pursuant to Chapters 328 and 1594 of the Statutes of 1982." (Rev. & Tax. Code, § 10753.8, subd. (b)(2), 11001.5, subd. (d)(2); see also Stats. 1991, ch. 89, § 210, p. 340.) Los Angeles and San Bernardino Counties settled their action to avoid triggering these provisions. Unlike the dissent, we do not believe that consideration of these recently enacted provisions is appropriate in analyzing the 1982 legislation. Nor do we assume, as the dissent does, that our decision necessarily triggers these provisions. That issue is not before us.

B. *The San Diego Action*

1. *Administrative Attempts to Obtain Reimbursement*

On March 13, 1991, San Diego submitted an invoice to the State Controller seeking reimbursement of its uncompensated expenditures on the CMS program for fiscal year 1989-1990. The Controller is a member of the Commission. (Gov. Code, § 17525.) On April 12, the Controller returned the invoice "without action," stating that "[n]o appropriation has been given to this office to allow for reimbursement" of medical costs for adult MIP's, and noting that litigation was pending regarding the state's reimbursement obligation. On December 18, 1991, San Diego submitted a similar invoice for the 1990-1991 fiscal year. The state has not acted regarding this second invoice.

[*84] 2. *Court Proceedings*

Responding to San Diego's notice of intent to terminate the CMS program, on March 11, 1991, the Legal Aid Society of San Diego filed a class action on behalf of CMS program beneficiaries seeking to enjoin termination of the program. The trial court later issued a preliminary injunction prohibiting San Diego "from taking any action to reduce or terminate" the CMS program.

On March 15, 1991, San Diego filed a cross-complaint and petition for writ of mandate under Code of Civil Procedure section 1085 against the state, the Commission, and various state officers. [9] The cross-complaint alleged that, by excluding adult MIP's from Medi-Cal and transferring responsibility for [**321] [***143] their medical care to counties, the

state had mandated a new program and higher level of service within the meaning of section 6. The cross-complaint further alleged that the state therefore had a duty under section 6 to reimburse San Diego for the entire cost of its CMS program, and that the state had failed to perform its duty.

9 The cross-complaint named the following state officers: (1) Kenneth W. Kizer, Director of the Department of Health Services; (2) Kim Belsh, Acting Secretary of the Health and Welfare Agency; (3) Gray Davis, the State Controller; (4) Kathleen Brown, the State Treasurer; and (5) Thomas Hayes, the Director of the Department of Finance. Where the context suggests, subsequent references in this opinion to "the state" include these officers.

Proceeding from these initial allegations, the cross-complaint alleged causes of action for indemnification, declaratory and injunctive relief, reimbursement and damages, and writ of mandate. In its first declaratory relief claim, San Diego alleged (on information and belief) that the state contended the CMS program was a nonreimbursable, county obligation. In its claim for reimbursement, San Diego alleged (again on information and belief) that the Commission had "previously denied the claims of other counties, ruling that county medical care programs for [adult MIP's] are not state-mandated and, therefore, counties are not entitled to reimbursement from the State for the costs of such programs." "Under these circumstances," San Diego asserted, "denial of the County's claim by the Commission . . . is virtually certain and further administrative pursuit of this claim would be a futile act."

For relief, San Diego requested a judgment declaring the following: (1) that the state must fully reimburse San Diego if it "is compelled to provide any CMS Program services to plaintiffs . . . after March 19, 1991"; (2) that section 6 requires the state "to fully fund the CMS Program" (or, alternatively, that the CMS program is discretionary); (3) that the state must pay San Diego for all of its unreimbursed costs for the CMS program during [*85] the 1989-1990 and 1990-1991 fiscal years; and (4) that the state shall assume responsibility for operating any court-ordered continuation of the CMS program. San Diego also requested that the court issue a writ of mandamus requiring the state to fulfill its reimbursement obligation. Finally, San Diego requested issuance of preliminary and permanent injunctions to ensure that the state fulfilled its obligations to the County.

In April 1991, San Diego determined that it could continue operating the CMS program using previously unavailable general fund revenues. Accordingly, San Diego and plaintiffs settled their dispute, and plaintiffs dismissed their complaint.

The matter proceeded solely on San Diego's cross-complaint. The court issued a preliminary injunction and alternative writ in May 1991. At a hearing on June 25, 1991, the court found that the state had an obligation to fund San Diego's CMS program, granted San Diego's request for a writ of mandate, and scheduled an evidentiary hearing to determine damages and remedies. On July 1, 1991, it issued an order reflecting this ruling and granting a peremptory writ of mandate. The writ did not issue, however, because of the pending hearing to determine damages. In December 1992, after an extensive evidentiary hearing and posthearing proceedings on the claim for a peremptory writ of mandate, the court issued a judgment confirming its jurisdiction to determine San Diego's claim, finding that section 6 required the state to fund the entire cost of San Diego's CMS program, determining the amount that the state owed San Diego for fiscal years 1989-1990 and 1990-1991, identifying funds available to the state to satisfy the judgment, and ordering issuance of a peremptory writ of mandate. [10] The court also issued a peremptory writ of mandate directing the state and various state officers to comply with the judgment.

10 The judgment dismissed all of San Diego's other claims.

The Court of Appeal affirmed the judgment insofar as it provided that section 6 requires the state to fund the CMS program. The Court of Appeal also affirmed the trial court's finding that the state had required San Diego to spend at least $ 41 million on the CMS program in fiscal years 1989-1990 and 1990-1991. However, the Court of Appeal reversed those portions of the judgment determining the final reimbursement amount and specifying the state funds from which the state was to satisfy the judgment. It remanded the matter to the Commission to determine the reimbursement amount and appropriate statutory remedies. We then granted the state's petition for review.

[**322] [***144] IV. SUPERIOR COURT JURISDICTION

(2a) Before reaching the merits of the appeal, we must address the state's assertion that the superior court lacked jurisdiction to hear San [*86] Diego's mandate claim. According to the state, in *Kinlaw, supra*, 54 Cal. 3d 326, we "unequivocally held that the orderly determination of [unfunded] mandate questions demands that only one claim on any particular alleged mandate be entertained by the courts at any given time." Thus, if a test claim is pending, "other potential claims must be held in abeyance . . . ." Applying this principle, the state asserts

that, since "the test claim litigation was pending" in the Los Angeles action when San Diego filed its cross-complaint seeking mandamus relief, "the superior court lacked jurisdiction from the outset, and the resulting judgment is a nullity. That defect cannot be cured by the settlement of the test claim, which occurred after judgment was entered herein."

In *Kinlaw*, we held that [HN9]individual taxpayers and recipients of government benefits lack standing to enforce section 6 because the applicable administrative procedures, which "are the exclusive means" for determining and enforcing the state's section 6 obligations, "are available only to local agencies and school districts directly affected by a state mandate . . . ." (*Kinlaw, supra*, 54 Cal. 3d at p. 328.) In reaching this conclusion, we explained that the reimbursement right under section 6 "is a right given by the Constitution to local agencies, not individuals either as taxpayers or recipients of government benefits and services." (*Id.* at p. 334.) We concluded that "[n]either public policy nor practical necessity compels creation of a judicial remedy by which individuals may enforce the right of the county to such revenues." (*Id.* at p. 335.)

In finding that individuals do not have standing to enforce the section 6 rights of local agencies, we made several observations in *Kinlaw* pertinent to operation of the statutory process as it applies to entities that do have standing. Citing Government Code section 17500, we explained that "the Legislature enacted comprehensive administrative procedures for resolution of claims arising out of section 6 . . . because the absence of a uniform procedure had resulted in inconsistent rulings on the existence of state mandates, unnecessary litigation, reimbursement delays, and, apparently, resultant uncertainties in accommodating reimbursement requirements in the budgetary process." (*Kinlaw, supra*, 54 Cal. 3d at p. 331.) Thus, the governing statutes "establish[] procedures which exist for the express purpose of avoiding multiple proceedings, judicial and administrative, addressing the same claim that a reimbursable state mandate has been created." (*Id.* at p. 333.) Specifically, "[t]he legislation establishes a test-claim procedure to expeditiously resolve disputes affecting multiple agencies . . . ." (*Id.* at p. 331.) Describing the Commission's application of the test-claim procedure to claims regarding exclusion of adult MIP's from Medi-Cal, we observed: "The test claim by the County of Los Angeles was filed prior to that [*87] proposed by Alameda County. The Alameda County claim was rejected for that reason. (See [Gov. Code,] § 17521.) Los Angeles County permitted San Bernardino County to join in its claim which the Commission accepted as a test claim intended to resolve the [adult MIP exclusion] issues . . . . Los Angeles County declined a request from Alameda County that it be included in the test claim . . . ." (*Id.* at p. 331, fn. 4.)

Consistent with our observations in *Kinlaw*, we here agree with the state that the trial court should not have proceeded to resolve San Diego's claim for reimbursement under section 6 while the Los Angeles action was pending. A contrary conclusion would undermine one of "the express purpose[s]" OF THE STATUTORY PROCEDURE: to "avoid[] multiple proceedings . . . addressing the same claim that a reimbursable state mandate has been created." (*Kinlaw, supra*, 54 Cal. 3d at p. 333.)

(3) However, we reject the state's assertion that the error was jurisdictional. [HN10] The power of superior courts to perform mandamus review [**323] [***145] of administrative decisions derives in part from article VI, section 10 of the California Constitution. (*Bixby v. Pierno* (1971) 4 Cal. 3d 130, 138 [93 Cal. Rptr. 234, 481 P.2d 242]; *Lipari v. Department of Motor Vehicles* (1993) 16 Cal. App. 4th 667, 672 [20 Cal. Rptr. 2d 246].) That section gives "[t]he Supreme Court, courts of appeal, [and] superior courts . . . original jurisdiction in proceedings for extraordinary relief in the nature of mandamus . . . ." (Cal. Const., art. VI, § 10.) "The jurisdiction thus vested may not lightly be deemed to have been destroyed." (*Garrison v. Rourke* (1948) 32 Cal. 2d 430, 435 [196 P.2d 884], overruled on another ground in *Keane v. Smith* (1971) 4 Cal. 3d 932, 939 [95 Cal. Rptr. 197, 485 P.2d 261].) "While the courts are subject to reasonable statutory regulation of procedure and other matters, they will maintain their constitutional powers in order effectively to function as a separate department of government. [Citations.] Consequently an intent to defeat the exercise of the court's jurisdiction will not be supplied by implication." (*Garrison, supra*, at p. 436.) **(2b)** Here, we find no statutory provision that either "expressly provide[s]" (*id.* at p. 435) or otherwise "clearly indicate[s]" (*id.* at p. 436) that the Legislature intended to divest all courts other than the court hearing the test claim of their mandamus jurisdiction.

Rather, following *Dowdall v. Superior Court* (1920) 183 Cal. 348 [191 P. 685] (*Dowdall*), we interpret the governing statutes as simply vesting primary jurisdiction in the court hearing the test claim. In *Dowdall*, we determined the jurisdictional effect of Code of Civil Procedure former section 1699 on actions to settle the account of trustees of a testamentary trust. Code of Civil Procedure former section 1699 provided in part: "Where any trust [*88] has been created by or under any will to continue after distribution, the Superior Court shall not lose jurisdiction of the estate by final distribution, but shall retain jurisdiction thereof for the purpose of the settlement of accounts under the trust." (Stats. 1889, ch. 228, § 1, p. 337.) We explained that, under this section, "the superior court, sitting in probate upon the distribu-

tion of an estate wherein the will creates a trust, retain[ed] jurisdiction of the estate for the purpose of the settlement of the accounts under the trust." (*Dowdall, supra,* 183 Cal. at p. 353.) However, we further observed that "the superior court of each county in the state has general jurisdiction in equity to settle trustees' accounts and to entertain actions for injunctions. This jurisdiction is, in a sense, concurrent with that of the superior court, which, by virtue of the decree of distribution, has jurisdiction of a trust created by will. The latter, however, is the primary jurisdiction, and if a bill in equity is filed in any other superior court for the purpose of settling the account of such trustee, that court, upon being informed of the jurisdiction of the court in probate and that an account is to be or has been filed therein for settlement, should postpone the proceeding in its own case and allow the account to be settled by the court having primary jurisdiction thereof." (*Ibid.*)

Similarly, we conclude that, [HN11]under the statutes governing determination of unfunded mandate claims, the court hearing the test claim has primary jurisdiction. Thus, if an action asserting the same unfunded mandate claim is filed in any other superior court, that court, upon being informed of the pending test claim, should postpone the proceeding before it and allow the court having primary jurisdiction to determine the test claim.

However, a court's erroneous refusal to stay further proceedings does not render those further proceedings void for lack of jurisdiction. As we explained in *Dowdall*, [HN12]a court that refuses to defer to another court's primary jurisdiction "is not without jurisdiction." (*Dowdall, supra,* 183 Cal. at p. 353.) Accordingly, notwithstanding pendency of the Los Angeles action, the trial court here did not lack jurisdiction to determine San Diego's mandamus petition. (See *Collins v. Ramish* (1920) 182 Cal. 360, 366-369 [188 P. 550] [although trial court erred in refusing to abate action because of former action pending, new trial was not warranted on issues that the trial court correctly decided]; *People* ex rel. *Garamendi v. American Autoplan, Inc.* (1993) 20 Cal. App. 4th 760, 772 [***146] [25 Cal. Rptr. 2d 192] [**324] (*Garamendi*) ["rule of exclusive concurrent jurisdiction is not 'jurisdictional' in the sense that failure to comply renders subsequent proceedings void"]; *Stearns v. Los Angeles City School Dist.* (1966) 244 Cal. App. 2d 696, 718 [53 Cal. Rptr. 482, 21 A.L.R.3d 164] [where trial court errs in failing to stay proceedings in [*89] deference to jurisdiction of another court, reversal would be frivolous absent errors regarding the merits].) [11]

> 11 In *Garamendi, supra,* 20 Cal. App. 4th at pages 771-775, the court discussed procedural requirements for raising a claim that another court has already exercised its concurrent jurisdiction. Given our conclusion that the trial court's error here was not jurisdictional, we express no opinion about this discussion in *Garamendi* or the sufficiency of the state's efforts to raise the issue in this case.

The trial court's failure to defer to the primary jurisdiction of the court hearing the Los Angeles action did not prejudice the state. Contrary to the state's assertion, the trial court did not "usurp" the Commission's "authority to determine, in the first place, whether or not legislation creates a mandate." The Commission had already exercised that authority in the Los Angeles action. Moreover, given the settlement of the Los Angeles action, which included vacating the judgment in that action, the trial court's exercise of jurisdiction here did not result in one of the principal harms that the statutory procedure seeks to prevent: multiple decisions regarding an unfunded mandate question. Finally, the lack of an administrative record specifically relating to San Diego's claim did not prejudice the state [HN13]because the threshold determination of whether a statute imposes a state mandate is an issue of law. (*County of Fresno v. Lehman* (1991) 229 Cal. App. 3d 340, 347 [280 Cal. Rptr. 310].) To the extent that an administrative record was necessary, the record developed in the Los Angeles action could have been submitted to the trial court. [12] (See *Los Angeles Unified School Dist. v. State of California* (1988) 199 Cal. App. 3d 686, 689 [245 Cal. Rptr. 140].)

> 12 Notably, in discussing the options still available to San Diego, the state asserts that San Diego "might have been able to go to superior court and file a [mandamus] petition based on the record of the prior test claim."

We also find that, on the facts of this case, San Diego's failure to submit a test claim to the Commission before seeking judicial relief did not affect the superior court's jurisdiction. [HN14]Ordinarily, counties seeking to pursue an unfunded mandate claim under section 6 must exhaust their administrative remedies. (*Central Delta Water Agency v. State Water Resources Control Bd.* (1993) 17 Cal. App. 4th 621, 641 [21 Cal. Rptr. 2d 453]; *County of Contra Costa v. State of California* (1986) 177 Cal. App. 3d 62, 73-77 [222 Cal. Rptr. 750] (*County of Contra Costa*).) However, counties may pursue section 6 claims in superior court without first resorting to administrative remedies if they "can establish an exception to" the exhaustion requirement. (*County of Contra Costa, supra,* 177 Cal. App. 3d at p. 77.) The futility exception to the exhaustion requirement applies if a county can "state with assurance that the [Commission] would rule adversely in its own particular case. [Cita-

tions.]" (*Lindeleaf v. Agricultural Labor Relations Bd.* (1986) 41 Cal. 3d 861, 870 [226 Cal. Rptr. 119, 718 P.2d 106]; see also *County of Contra Costa, supra*, 177 Cal. App. 3d at pp. 77-78.)

[*90] We agree with the trial court and the Court of Appeal that the futility exception applied in this case. As we have previously noted, San Diego invoked this exception by alleging in its cross-complaint that the Commission's denial of its claim was "virtually certain" because the Commission had "previously denied the claims of other counties, ruling that county medical care programs for [adult MIP's] are not state-mandated and, therefore, counties are not entitled to reimbursement . . . ." Given that the Commission rejected the Los Angeles claim (which alleged the same unfunded mandate claim that San Diego alleged) and appealed the judicial reversal of its decision, the trial court correctly determined that further attempts to seek relief from the Commission would have been futile. Therefore, we reject the state's jurisdictional argument and proceed to the merits of the appeal.

[**325] [***147] V. EXISTENCE OF A MANDATE UNDER SECTION 6

(4) In determining whether there is a mandate under section 6, we turn to our decision in *Lucia Mar Unified School Dist. v. Honig* (1988) 44 Cal. 3d 830 [244 Cal. Rptr. 677, 750 P.2d 318] (*Lucia Mar*). There, we discussed section 6's application to Education Code section 59300, which "requires a school district to contribute part of the cost of educating pupils from the district at state schools for the severely handicapped." (*Lucia Mar, supra*, at p. 832.) Before 1979, the Legislature had statutorily required school districts "to contribute to the education of pupils from the districts at the state schools [citations] . . . ." (*Id.* at pp. 832-833.) The Legislature repealed the statutory requirements in 1979 and, on July 12, 1979, the state assumed full-funding responsibility. (*Id.* at p. 833.) On July 1, 1980, when section 6 became effective, the state still had full-funding responsibility. On June 28, 1981, Education Code section 59300 took effect. (*Lucia Mar, supra*, at p. 833.)

Various school districts filed a claim seeking reimbursement under section 6 for the payments that Education Code section 59300 requires. The Commission denied the claim, finding that the statute did not impose on the districts a new program or higher level of service. The trial court and Court of Appeal agreed, the latter "reasoning that a shift in the funding of an existing program is not a new program or a higher level of service" under section 6. (*Lucia Mar, supra*, 44 Cal. 3d at p. 834.)

We reversed, finding that a contrary result would "violate the intent underlying section 6 . . . ." (*Lucia Mar, supra*, 44 Cal. 3d at p. 835.) That section "was intended to preclude the state from shifting to local agencies the financial responsibility for providing public services in view of the[] [*91] restrictions on the taxing and spending power of the local entities" that articles XIII A and XIII B of the California Constitution imposed. (*Lucia Mar, supra*, at pp. 835-836.) "The intent of the section would plainly be violated if the state could, while retaining administrative control of programs it has supported with state tax money, simply shift the cost of the programs to local government on the theory that the shift does not violate section 6 . . . because the programs are not 'new.' Whether the shifting of costs is accomplished by compelling local governments to pay the cost of entirely new programs created by the state, *or by compelling them to accept financial responsibility in whole or in part for a program which was funded entirely by the state before the advent of article XIII B*, the result seems equally violative of the fundamental purpose underlying section 6 . . . ." (*Id.* at p. 836, italics added, fn. omitted.) We thus concluded in *Lucia Mar* "that because [Education Code] section 59300 shifts partial financial responsibility for the support of students in the state-operated schools from the state to school districts--an obligation the school districts did not have at the time article XIII B was adopted--it calls for [the school districts] to support a 'new program' within the meaning of section 6." (*Ibid.*, fn. omitted.)

The similarities between *Lucia Mar* and the case before us "are striking. In *Lucia Mar*, prior to 1979 the state and county shared the cost of educating handicapped children in state schools; in the present case from 1971-197[8] the state and county shared the cost of caring for [adult MIP's] under the Medi-Cal program. . . . [F]ollowing enactment of [article XIII A], the state took full responsibility for both programs." (*Kinlaw, supra*, 54 Cal. 3d at p. 353 (dis. opn. of Broussard, J.).) As to both programs, the Legislature cited adoption of article XIII A of the California Constitution, and specifically its effect on tax revenues, as the basis for the state's assumption of full funding responsibility. (Stats. 1979, ch. 237, § 10, p. 493; Stats. 1979, ch. 282, § 106, p. 1059.) "Then in 1981 (for handicapped children) and 1982 (for [adult MIP's]), the state sought to shift some of the burden back to the counties." (*Kinlaw, supra*, [**326] [***148] 54 Cal. 3d at p. 353 (dis. opn. of Broussard, J.).)

Adopting the Commission's analysis in the Los Angeles action, the state nevertheless argues that *Lucia Mar* "is inapposite." The school program at issue in *Lucia Mar* "had been wholly operated, administered and financed by the state" and "was unquestionably a 'state program.' " " 'In contrast,' " the state argues, " 'the program here has never been operated or administered by the State of California. The counties have always borne legal and financial responsibility for' " it under section

17000 and its predecessors. [13] The courts have interpreted section 17000 as "impos[ing] upon counties a duty to [*92] provide hospital and medical services to indigent residents. [Citations.]" (*Board of Supervisors v. Superior Court* (1989) 207 Cal. App. 3d 552, 557 [254 Cal. Rptr. 905].) Thus, the state argues, the source of San Diego's obligation to provide medical care to adult MIP's is section 17000, not the 1982 legislation. Moreover, because the Legislature enacted section 17000 in 1965, and section 6 does not apply to "mandates enacted prior to January 1, 1975," there is no reimbursable mandate. Finally, the state argues that, because section 17001 give counties "complete discretion" in setting eligibility and service standards under section 17000, there is no mandate. A contrary conclusion, the state asserts, "would erroneously expand the definition of what constitutes a 'new program' under" section 6. As we explain, we reject these arguments.

13 "County General Assistance in California dates from 1855, and for many years afforded the only form of relief to indigents." (*Mooney v. Pickett* (1971) 4 Cal. 3d 669, 677 [94 Cal. Rptr. 279, 483 P.2d 1231] (*Mooney*).) Section 17000 is substantively identical to former section 2500, which was enacted in 1937. (Stats. 1937, chs. 369, 464, pp. 1097, 1406.)

A. *The Source and Existence of San Diego's Obligation*

1. *The Residual Nature of the Counties' Duty Under Section 17000*

The state's argument that San Diego's obligation to provide medical care to adult MIP's predates the 1982 legislation contains numerous errors. First, the state misunderstands San Diego's obligation under section 17000. That [HN15]section creates "the *residual* fund" to sustain indigents "who cannot qualify . . . under any specialized aid programs." (*Mooney, supra*, 4 Cal. 3d at p. 681, italics added; see also *Board of Supervisors v. Superior Court, supra*, 207 Cal. App. 3d at p. 562; *Boehm v. Superior Court* (1986) 178 Cal. App. 3d 494, 499 [223 Cal. Rptr. 716] [general assistance "is a program of last resort"].) By its express terms, the statute requires a county to relieve and support indigent persons *only* "when such persons are not supported and relieved by their relatives or friends, by their own means, or by state hospitals or other state or private institutions." (§ 17000.) [14] "Consequently, to the extent that the state or federal governments provide[d] care for [adult MIP's], the [C]ounty's obligation to do so [was] reduced . . . ." (*Kinlaw, supra*, 54 Cal. 3d at p. 354, fn. 14 (dis. opn. of Broussard, J.).) [15]

14 See also *County of Los Angeles v. Frisbie* (1942) 19 Cal. 2d 634, 639 [122 P.2d 526] (construing former section 2500); *Jennings v. Jones* (1985) 165 Cal. App. 3d 1083, 1091 [212 Cal. Rptr. 134] (counties must support all indigent persons "having no other means of support"); *Union of American Physicians & Dentists v. County of Santa Clara* (1983) 149 Cal. App. 3d 45, 51, fn. 10 [196 Cal. Rptr. 602]; *Rogers v. Detrich* (1976) 58 Cal. App. 3d 90, 95 [128 Cal. Rptr. 261] (counties have duty of support "where such support is not otherwise furnished").

15 In asserting that Medi-Cal coverage did not supplant San Diego's obligation under section 17000, the dissent incorrectly relies on *Madera Community Hospital v. County of Madera* (1984) 155 Cal. App. 3d 136 [201 Cal. Rptr. 768] (*Madera*) and *Cooke, supra*, 213 Cal. App. 3d 401. (Dis. opn. of Kennard, J., *post*, at p. 115.) In *Madera*, the court voided a county ordinance that extended county benefits under section 17000 only to persons " 'meeting all eligibility standards for the Medi-Cal program.' " (*Madera, supra*, 155 Cal. App. 3d at p. 150.) The court explained: "Because all funding for the Medi-Cal program comes from either the federal or the state government . . ., [c]ounty has denied any financial obligation whatsoever from county funds for the medical care of its indigent and poor residents." (*Ibid.*) Thus, properly understood, *Madera* held only that Medi-Cal does not relieve counties of their obligation to provide medical care to persons who are "indigent" within the meaning of section 17000 but who are ineligible for Medi-Cal. The limit of *Madera*'s holding is apparent from the court's reliance on a 1979 opinion of the Attorney General discussing the scope of a county's authority under section 17000. (*Madera, supra*, 155 Cal. App. 3d at pp. 151-152.) The Attorney General explained that "[t]he county obligation [under section 17000] to provide general relief extends to those indigents who do not qualify under specialized aid programs, . . . including Medi-Cal." (62 Ops.Cal.Atty.Gen. 70, 71, fn. 1 (1979).) Moreover, the *Madera* court expressly recognized that state and federal programs "alleviate, to a greater or lesser extent, [a] [c]ounty's burden." (*Madera, supra*, 155 Cal. App. 3d at p. 151.) In *Cooke*, the court simply made a passing reference to *Madera* in dictum describing the coverage history of Medi-Cal. (*Cooke, supra*, 213 Cal. App. 3d at p. 411.) It neither analyzed the issue before us nor explained the meaning of the dictum that the dissent cites.

[**327] [***149] As we have explained, the state began providing adult MIP's with medical care under Medi-Cal in 1971. Although it initially required counties to [*93] contribute generally to the costs of Medi-Cal, it did not set forth a specific amount for coverage of MIP's. The state was primarily responsible for the costs of the program, and the counties were simply required to contribute funds to defray the state's costs. Beginning with the 1978-1979 fiscal year, the state paid all costs of the Medi-Cal program, including the cost of medical care for adult MIP's. Thus, when section 6 was adopted in November 1979, to the extent that Medi-Cal provided medical care to adult MIP's, San Diego bore no financial responsibility for these health care costs. [16]

16 As we have previously explained, even before 1971 the state, through the county option, assumed much of the financial responsibility for providing medical care to adult MIP's.

The California Attorney General has expressed a similar understanding of Medi-Cal's effect on the counties' medical care responsibility under section 17000. After the 1971 extension of Medi-Cal coverage to MIP's, Fresno County sought an opinion regarding the scope of its duty to provide medical care under section 17000. It asserted that the 1971 repeal of former section 14108.5, which declared the Legislature's concern with the counties' problems in caring for indigents not eligible for Medi-Cal, evidenced a legislative intent to preempt the field of providing health services. (56 Ops.Cal.Atty.Gen., *supra*, at p. 571.) The Attorney General disagreed, concluding that the 1971 change "did not alter the duty of the counties to provide medical care to those indigents not eligible for Medi-Cal." (*Id.* at p. 569.) The Attorney General explained: "The statement of concern acknowledged the obligation of counties to continue to provide medical assistance under section 17000; the removal of the statement of concern was not accompanied by elimination of such duty on the part of the counties, *except as the addition of* [*MIP's*] *to the Medi-Cal program would remove the burden on the counties to provide medical care for such persons*." (*Id.* at p. 571, italics added.)

[*94] Indeed, the Legislature's statement of intent in an uncodified section of the 1982 legislation excluding adult MIP's from Medi-Cal suggests that it also shared our understanding of section 17000. Section 8.3 of the 1982 Medi-Cal revisions expressly declared the Legislature's intent "[i]n eliminating [M]edically [I]ndigent [A]dults from the Medi-Cal program . . . ." (Stats. 1982, ch. 328, § 8.3, p. 1575; Stats. 1982, ch. 1594, § 86, p. 6357.) It stated in part: "It is further the intent of the Legislature to provide counties with as much flexibility as possible in organizing county health services to serve *the population being transferred*." (Stats. 1982, ch. 328, § 8.3, p. 1576; Stats. 1982, ch. 1594, § 86, p. 6357, italics added.) If, as the state contends, counties had always been responsible under section 17000 for the medical care of adult MIP's, the description of adult MIP's as "the population being transferred" would have been inaccurate. By so describing adult MIP's, the Legislature indicated its understanding that counties did not have this responsibility while adult MIP's were eligible for Medi-Cal. These sources fully support our rejection of the state's argument that the 1982 legislation did not impose a mandate because, under section 17000, counties had always borne the responsibility for providing medical care to adult MIP's.

2. *The State's Assumption of Full Funding Responsibility for Providing Medical Care to Adult MIP's Under Medi-Cal*

To support its argument that it never relieved counties of their obligation under section [**328] [***150] 17000 to provide medical care to adult MIP's, the state characterizes as "temporary" the Legislature's assumption of full-funding responsibility for adult MIP's. According to the state, "any ongoing responsibility of the county was, at best, only temporarily, partially, alleviated (and never supplanted)." The state asserts that the Court of Appeal thus "erred by focusing on one phase in th[e] shifting pattern of arrangements" for funding indigent health care, "a focus which led to a myopic conclusion that the state alone is forever responsible for funding the health care for" adult MIP's.

A comparison of the 1978 and 1979 statutes that eliminated the counties' share of Medi-Cal costs refutes the state's claim. The Legislature expressly limited the effect of the 1978 legislation to one fiscal year, providing that the state "shall pay" each county's Medi-Cal cost share "for the period from July 1, 1978, to June 30, 1979." (Stats. 1978, ch. 292, § 33, p. 610.) The Legislative Counsel's Digest explained that this section would require the state to pay "[a]ll county costs for Medi-Cal" for "the 1978-79 fiscal year only." (Legis. Counsel's Dig., Sen. Bill No. 154, 4 Stats. 1978 (Reg. Sess.), Summary Dig., p. 71.) The digest further explained that the purpose of the bill containing this section was "the *partial* relief of local government from the *temporary* difficulties brought about by the approval of Proposition 13." [*95] (*Id.* at p. 70, italics added.) Clearly, the Legislature knew how to include words of limitation when it intended the effects of its provisions to be temporary.

By contrast, the 1979 legislation contains no such limiting language. It simply provided: " Section 14150 of the Welfare and Institutions Code is repealed." (Stats. 1979, ch. 282, § 74, p. 1043.) In setting forth the need to enact the legislation as an urgency statute, the Legisla-

ture explained: "The adoption of Article XIII A . . . may cause the curtailment or elimination of programs and services which are vital to the state's public health, safety, education, and welfare. In order that such services not be interrupted, it is necessary that this act take effect immediately." (Stats. 1979, ch. 282, § 106, p. 1059.) In describing the effect of this legislation, the Legislative Counsel first explained that, "[u]nder existing law, the counties pay a specified annual share of the cost of" Medi-Cal. (Legis. Counsel's Dig., Assem. Bill No. 8, 4 Stats. 1979 (Reg. Sess.), Summary Dig., p. 79.) Referring to the 1978 legislation, it further explained that "[f]or the 1978-79 fiscal year only, the state pays . . . [P] . . . [a]ll county costs for Medi-Cal . . . ." (*Ibid.*) The 1979 legislation, the digest continued, "provid[ed] for state assumption of all county costs of Medi-Cal." (*Ibid.*) We find nothing in the 1979 legislation or the Legislative Counsel's summary indicating a legislative intent to eliminate the counties' cost share of Medi-Cal only temporarily.

The state budget process for the 1980-1981 fiscal year confirms that the Legislature's assumption of all Medi-Cal costs was not viewed as "temporary." In the summary of his proposed budget, then Governor Brown described Assembly Bill No. 8, 1981-1982 Regular Session, generally as "a long-term local financing measure" (Governor's Budget for 1980-1981 as submitted to Legislature (1979-1980 Reg. Sess.) Summary of Local Government Fiscal Relief, p. A-30) through which "[t]he total cost of [the Medi-Cal] program was *permanently* assumed by the State . . . ." (*Id.* at p. A-32, italics added.) Similarly, in describing to the Joint Legislative Budget Committee the Medi-Cal funding item in the proposed budget, the Legislative Analyst explained: "Item 287 includes the state cost of 'buying out' the county share of Medi-Cal expenditures. Following passage of Proposition 13, [Senate Bill No.] 154 appropriated $ 418 million to relieve counties of all fiscal responsibility for Medi-Cal program costs. Subsequently, [Assembly Bill No.] 8 was enacted, *which made permanent state assumption of county Medi-Cal costs*." (Legis. Analyst, Rep. to Joint Legis. Budget Com., Analysis of 1980-1981 Budget Bill, Assem. Bill No. 2020 (1979-1980 Reg. Sess.) at p. 721, italics added.) Thus, the state errs in asserting that the 1979 legislation eliminated the counties' financial support of Medi-Cal "only temporarily."

[*96] [**329] [***151] 3. *State Administration of Medical Care for Adult MIP's Under Medi-Cal*

The state argues that, unlike the school program before us in *Lucia Mar, supra*, 44 Cal. 3d 830, which "had been wholly operated, administered and financed by the state," the program for providing medical care to adult MIP's " 'has never been operated or administered by' " the state. According to the state, Medi-Cal was simply a state "reimbursement program" for care that section 17000 required counties to provide. The state is incorrect.

One of the legislative goals of Medi-Cal was "to allow eligible persons to secure basic health care in the same manner employed by the public generally, and without discrimination or segregation based purely on their economic disability." (Stats. 1966, Second Ex. Sess. 1965, ch. 4, § 2, p. 104.) "In effect, this meant that poorer people could have access to a private practitioner of their choice, and not be relegated to a county hospital program." (*California Medical Assn. v. Brian* (1973) 30 Cal. App. 3d 637, 642 [106 Cal. Rptr. 555].) Medi-Cal "provided for reimbursement to both public and private health care providers for medical services rendered." (*Lackner, supra*, 97 Cal. App. 3d at p. 581.) It further directed that, "[i]nsofar as practical," public assistance recipients be afforded "free choice of arrangements under which they shall receive basic health care." (Stats. 1966, Second Ex. Sess. 1965, ch. 4, § 2, p. 115.) Finally, since its inception, Medi-Cal has permitted county boards of supervisors to "prescribe rules which authorize the county hospital to integrate its services with those of other hospitals into a system of community service which offers free choice of hospitals to those requiring hospital care. The intent of this section is to eliminate discrimination or segregation based on economic disability so that the county hospital and other hospitals in the community share in providing services to paying patients and to those who qualify for care in public medical care programs." (§ 14000.2.) Thus, "Medi-Cal eligibles were to be able to secure health care in the same manner employed by the general public (i.e., in the private sector or at a county facility)." (1974 Legis. Analyst's Rep., *supra*, at p. 625; see also Preliminary Rep., *supra*, at p. 17.) By allowing eligible persons "a choice of medical facilities for treatment," Medi-Cal placed county health care providers "in competition with private hospitals." (*Hall, supra*, 23 Cal. App. 3d at p. 1061.)

Moreover, administration of Medi-Cal over the years has been the responsibility of various state departments and agencies. (§ 10720-10721, 14061-14062, 14105, 14203; *Belsh, supra*, 13 Cal. 4th at p. 751; *Morris, supra*, 67 Cal. 2d at p. 741; Summary of Major Events, *supra*, at pp. 2-3, 15.) Thus, [HN16]"[i]n adopting the Medi-Cal program the state Legislature, for the most part, shifted indigent medical care from being a county responsibility to a State [*97] responsibility under the Medi-Cal program. [Citation.]" (*Bay General Community Hospital v. County of San Diego* (1984) 156 Cal. App. 3d 944, 959 [203 Cal. Rptr. 184] (*Bay General*); see also Preliminary Rep., *supra*, at p. 18 [with certain exceptions, Medi-Cal "shifted to the state" the responsibility for administration of the medical care pro-

vided to eligible persons].) We therefore reject the state's assertion that, while Medi-Cal covered adult MIP's, county facilities were the sole providers of their medical care, and counties both operated and administered the program that provided that care.

The circumstances we have discussed readily distinguish this case from *County of Los Angeles v. Commission on State Mandates* (1995) 32 Cal. App. 4th 805 [38 Cal. Rptr. 2d 304], on which the state relies. There, the court rejected the claim that Penal Code section 987.9, which required counties to provide criminal defendants with certain defense funds, imposed an unfunded state mandate. Los Angeles filed the claim after the state, which had enacted appropriations between 1977 and 1990 "to reimburse counties for their costs under" the statute, made no appropriation for the 1990-1991 fiscal year. (*County of Los Angeles v. Commission on State Mandates, supra*, at p. 812.) In rejecting the claim, [**330] [***152] the court first held that there was no state mandate because Penal Code section 987.9 merely implemented the requirements of federal law. (*County of Los Angeles v. Commission on State Mandates, supra*, at pp. 814-816.) Thus, the court stated, "[a]ssuming, arguendo, the provisions of [Penal Code] section 987.9 [constituted] a new program" under section 6, there was no state mandate. (*County of Los Angeles v. Commission on State Mandates, supra*, at p. 818.) Here, of course, it is unquestionably the state that has required San Diego to provide medical care to indigent persons.

In dictum, the court also rejected the argument that, under *Lucia Mar, supra*, 44 Cal. 3d 830, the state's "decision not to reimburse the counties for their programs under [Penal Code] section 987.9" imposed a new program by shifting financial responsibility for the program to counties. (*County of Los Angeles v. Commission on State Mandates, supra*, 32 Cal. App. 4th at p. 817.) The court explained: "In contrast [to *Lucia Mar*], the program here has never been operated or administered by the State of California. The counties have always borne legal and financial responsibility for implementing the procedures under [Penal Code] section 987.9. The state merely reimbursed counties for specific expenses incurred by the counties in their operation of a program for which they had a primary legal and financial responsibility." (*Ibid.*) Here, as we have explained, between 1971 and 1983, the state administered and bore financial responsibility for the medical care that adult MIP's received under Medi-Cal. The Medi-Cal program was not simply a [*98] method of reimbursement for county costs. Thus, the state's reliance on this dictum is misplaced. [17]

17 Because *County of Los Angeles v. Commission on State Mandates, supra*, 32 Cal. App. 4th 805, is distinguishable, we need not (and do not) express an opinion regarding the court's analysis in that decision or its conclusions.

In summary, our discussion demonstrates the Legislature excluded adult MIP's from Medi-Cal *knowing* and *intending* that the 1982 legislation would trigger the counties' responsibility to provide medical care as providers of last resort under section 17000. Thus, through the 1982 legislation, the Legislature attempted to do precisely that which the voters enacted section 6 to prevent: "transfer[] to [counties] the fiscal responsibility for providing services which the state believed should be extended to the public." [18] (*County of Los Angeles, supra*, 43 Cal. 3d at p. 56; see also *City of Sacramento v. State of California, supra*, 50 Cal. 3d at p. 68 [A "central purpose" of section 6 was "to prevent the state's transfer of the *cost of government* from *itself* to the local level."].) Accordingly, we view the 1982 legislation as having mandated a " 'new program' " on counties by "compelling them to accept financial responsibility in whole or in part for a program," i.e., medical care for adult MIP's, "which was funded entirely by the state before the advent of article XIII B." [19] (*Lucia Mar, supra*, 44 Cal. 3d at p. 836.)

18 The state properly does not contend that the provision of medical care to adult MIP's is not a "program" within the meaning of section 6. (See *County of Los Angeles, supra*, 43 Cal. 3d at p. 56 [section 6 applies to "programs that carry out the governmental function of providing services to the public"].)

19 Alternatively, the 1982 legislation can be viewed as having mandated an increase in the services that counties were providing through existing section 17000 programs, by adding adult MIP's to the indigent population that counties already had to serve under that section. (See *County of Los Angeles, supra*, 43 Cal. 3d at p. 56 ["subvention requirement for increased or higher level of service is directed to state mandated increases in the services provided by local agencies in existing 'programs' "].)

A contrary conclusion would defeat the purpose of section 6. Under the state's interpretation of that section, because section 17000 was enacted before 1975, the Legislature could eliminate the *entire* Medi-Cal program and shift to the counties under section 17000 complete financial responsibility for medical care that the state has been providing [**331] [***153] since 1966. However, the taxing and spending limitations imposed by articles XIII A and XIII B would greatly limit the ability of counties to meet their expanded section 17000 obligation. "County taxpayers would be forced to accept new taxes or see the county forced to cut existing pro-

grams further . . . ." (*Kinlaw, supra*, 54 Cal. 3d at p. 351 (dis. opn. of Broussard, J.).) As we have previously explained, the voters, recognizing that articles XIII A and XIII B left counties "ill equipped" to assume such increased financial responsibilities, adopted section 6 precisely to avoid this result. (*County of Los Angeles,* [*99] *supra*, 43 Cal. 3d at p. 61.) Thus, it was the voters who decreed that we must, as the state puts it, "focus[] on one phase in th[e] shifting pattern of [financial] arrangements" between the state and the counties. Under section 6, the state simply cannot "compel[] [counties] to accept financial responsibility in whole or in part for a program which was funded entirely by the state before the advent of article XIII B . . . ." [20] (*Lucia Mar, supra,* 44 Cal. 3d at p. 836.)

20 In reaching a contrary conclusion, the dissent ignores the electorate's purpose in adopting section 6. The dissent also mischaracterizes our decision. We do not hold that "whenever there is a change in a state program that has the effect of increasing a county's financial burden under section 17000 there must be reimbursement by the state." (Dis. opn. of Kennard, J., *post*, at p. 116.) Rather, we hold that [HN17]section 6 prohibits the state from shifting to counties the costs of state programs for which the state assumed complete financial responsibility before adoption of section 6. Whether the state may discontinue assistance that it initiated after section 6's adoption is a question that is not before us.

B. *County Discretion to Set Eligibility and Service Standards*

(5a) The state next argues that, because San Diego had statutory discretion to set eligibility and service standards, there was no reimbursable mandate. Citing section 16704, the state asserts that the 1982 legislation required San Diego to spend MISA funds "only on those whom the county deems eligible under § 17000," "gave the county exclusive authority to determine the level and type of benefits it would provide," and required counties "to include [adult MIP's] in their § 17000 eligibility **only to the extent state funds were available and then only for 3 years.**" (Original emphasis.) [21] According to the state, under section 17001, "[t]he counties [*100] have complete discretion over the determination of eligibility, scope of benefits and how the services will be provided." [22]

21 [HN18]As amended in 1982, section 16704, subdivision (c)(1), provided in relevant part: "The [county board of supervisors] shall assure that it will expend [MISA] funds only for the health services specified in Sections 14132 and 14021 provided to persons certified as eligible for such services pursuant to Section 17000 and shall assure that it will incur no less in net costs of county funds for county health services in any fiscal year than the amount required to obtain the maximum allocation under Section 16702." (Stats. 1982, ch. 1594, § 70, p. 6346.) [HN19]Section 16704, subdivision (c)(3), provided in relevant part: "Any person whose income and resources meet the income and resource criteria for certification for services pursuant to Section 14005.7 other than for the aged, blind, or disabled, shall not be excluded from eligibility for services to the extent that state funds are provided. Such persons may be held financially liable for these services based upon the person's ability to pay. A county may not establish a payment requirement which would deny medically necessary services. This section shall not be construed to mandate that a county provide any specific level or type of health care service . . . [HN20]. The provisions of this paragraph shall become inoperative if a court ruling is issued which decrees that the provisions of this paragraph mandates [*sic*] that additional state funds be provided and which requires that additional state reimbursement be made to counties for costs incurred under this paragraph. This paragraph shall be operative only until June 30, 1983, unless a later enacted statute extends or deletes that date." (Stats. 1982, ch. 1594, § 70, pp. 6346-6347.)

22 [HN21]Section 17001 provides: "The board of supervisors of each county, or the agency authorized by county charter, shall adopt standards of aid and care for the indigent and dependent poor of the county or city and county."

The state exaggerates the extent of a county's discretion under section 17001. It is true "case law . . . has recognized that [HN22]section 17001 confers broad discretion upon the counties in performing their statutory duty to provide general assistance benefits to needy residents. [Citations.]" (*Robbins v.* [**332] [***154] *Superior Court* (1985) 38 Cal. 3d 199, 211 [211 Cal. Rptr. 398, 695 P.2d 695] (*Robbins*).) However, there are "clear-cut limits" to this discretion. (*Ibid.*) **(6)** The counties may exercise their discretion "only within fixed boundaries. In administering General Assistance relief the county acts as an agent of the state. [Citation.] [HN23]When a statute confers upon a state agency the authority to adopt regulations to implement, interpret, make specific or otherwise carry out its provisions, the agency's regulations must be consistent, not in conflict with the statute, and reasonably necessary to effectuate its purpose. (Gov. Code, § 11374.)" (*Mooney, supra*, 4

Cal. 3d at p. 679.) Thus, the counties' eligibility and service standards must "carry out" the objectives of section 17000. (*Mooney, supra*, 4 Cal. 3d at p. 679; see also *Poverty Resistance Center v. Hart* (1989) 213 Cal. App. 3d 295, 304-305 [261 Cal. Rptr. 545]; § 11000 ["provisions of law relating to a public assistance program shall be fairly and equitably construed to effect the stated objects and purposes of the program"].) County standards that fail to carry out section 17000's objectives "are void and no protestations that they are merely an exercise of administrative discretion can sanctify them." (*Morris, supra*, 67 Cal. 2d at p. 737.) [HN24]Courts, which have " 'final responsibility for the interpretation of the law,' " must strike them down. (*Id.* at p. 748.) Indeed, despite the counties' statutory discretion, "courts have consistently invalidated . . . county welfare regulations that fail to meet statutory requirements. [Citations.]" (*Robbins, supra*, 38 Cal. 3d at p. 212.)

1. *Eligibility*

(5b) Regarding eligibility, we conclude that counties must provide medical care to all adult MIP's. As we emphasized in *Mooney*, [HN25]section 17000 requires counties to relieve and support " '*all indigent persons* lawfully resident therein, "when such persons are not supported and relieved by their relatives" or by some other means.' " (*Mooney, supra*, 4 Cal. 3d at p. 678; see also *Bernhardt v. Board of Supervisors* (1976) 58 Cal. App. 3d 806, 811 [130 Cal. Rptr. 189].) Moreover, section 10000 declares that the statutory "purpose" of division 9 of the Welfare and Institutions Code, which includes section 17000, "is to provide for protection, care, and assistance to the [*101] people of the state in need thereof, and to promote the welfare and happiness of all of the people of the state by providing appropriate aid and services to *all* of its needy and distressed." (Italics added.) Thus, [HN26]counties have no discretion to refuse to provide medical care to "indigent persons" within the meaning of section 17000 who do not receive it from other sources. [23] (See *Bell v. Board of Supervisors* (1994) 23 Cal. App. 4th 1695, 1706 [28 Cal. Rptr. 2d 919] [eligibility standards may not "defeat the purpose of the statutory scheme by depriving qualified recipients of mandated support"]; *Washington v. Board of Supervisors* (1993) 18 Cal. App. 4th 981, 985 [22 Cal. Rptr. 2d 852] [courts have repeatedly "voided county ordinances which have attempted to redefine eligibility standards set by state statute"].)

23 We disapprove *Bay General, supra*, 156 Cal. App. 3d at pages 959-960, insofar as it (1) states that a county's responsibility under section 17000 extends only to indigents as defined by the county's board of supervisors, and (2) suggests that a county may refuse to provide medical care to persons who are "indigent" within the meaning of section 17000 but do not qualify for Medi-Cal.

Although section 17000 does not define the term "indigent persons," the 1982 legislation made clear that all adult MIP's fall within this category for purposes of defining a county's obligation to provide medical care. [24] As part of its exclusion of adult MIP's, that legislation required counties to participate in the MISA program. (Stats. 1982, ch. 1594, § 68, 70, 86, pp. 6343-6347, 6357.) Regarding that program, the 1982 legislation amended section 16704, subdivision (c)(1), to require [**333] [***155] that a county board of supervisors, in applying for MISA funds, "assure that it will expend such funds only for [specified] health services . . . provided to persons certified as eligible for such services pursuant to Section 17000 . . . ." (Stats. 1982, ch. 1594, § 70, p. 6346.) At the same time, the 1982 legislation amended section 16704, subdivision (c)(3), to provide that "[a]ny person whose income and resources meet the income and resource criteria for certification for services pursuant to Section 14005.7 other than for the aged, blind, or disabled, shall not be excluded from eligibility for services to the extent that state funds are provided." (Stats. 1982, ch. 1594, § 70, p. 6346.) As the state correctly explains, under this provision, "counties had to include [Medically Indigent Adults] in their [section] 17000 eligibility" standards. By requiring counties to make all adult MIP's eligible for services paid for with MISA funds, while at the same time requiring counties to promise to spend such funds *only* on those certified as eligible under section 17000, the Legislature established that all adult MIP's are "indigent persons" for purposes of the counties' duty to provide medical care under section 17000. Otherwise, the counties could not comply with their promise.

24 Our conclusion is limited to this aspect of a county's duty under section 17000. We express no opinion regarding the scope of a county's duty to provide other forms of relief and support under section 17000.

[*102] Our conclusion is not affected by language in section 16704, subdivision (c)(3), making it "operative only until June 30, 1985, unless a later enacted statute extends or deletes that date." [25] As we have explained, the subdivision established that [HN27]adult MIP's are "indigent persons" within the meaning of section 17000 for medical care purposes. As we have also explained, section 17000 requires counties to relieve and support *all* "indigent persons." Thus, even if the state is correct in asserting that section 16704, subdivision (c)(3), is now inoperative and no longer prohibits counties from excluding adult MIP's from eligibility for medical services, section 17000 has that effect. [26]

25 The 1982 legislation made the subdivision operative until June 30, 1983. (Stats. 1982, ch. 1594, § 70, p. 6347.) In 1983, the Legislature repealed and reenacted section 16704, and extended the operative date of subdivision (c)(3) to June 30, 1985. (Stats. 1983, ch. 323, § 131.1, 131.2, pp. 1079-1080.)

26 Given our analysis, we express no opinion about the statement in *Cooke, supra*, 213 Cal. App. 3d at page 412, footnote 9, that the "life" of section 16704, subdivision (c)(3), "was implicitly extended" by the fact that the "paragraph remains in the statute despite three subsequent amendments to the statute . . . ."

Additionally, the coverage history of Medi-Cal demonstrates that the Legislature has always viewed all adult MIP's as "indigent persons" within the meaning of section 17000 for medical care purposes. As we have previously explained, when the Legislature created the original Medi-Cal program, which covered only categorically linked persons, it "declar[ed] its concern with the problems which [would] be facing the counties with respect to the medical care of indigent persons who [were] not covered" by Medi-Cal, "whose medical care [had to] be financed entirely by the counties in a time of heavily increasing medical costs." (Stats. 1966, Second Ex. Sess. 1965, ch. 4, § 2, p. 116 [enacting former § 14108.5].) Moreover, to ensure that the counties' Medi-Cal cost share would not leave counties "with insufficient funds to provide hospital care for those persons not eligible for Medi-Cal," the Legislature also created the county option. (*Hall, supra*, 23 Cal. App. 3d at p. 1061.) Through the county option, "the state agreed to assume all county health care costs . . . in excess of county costs incurred during the 1964-1965 fiscal year, adjusted for population increases." (*Lackner, supra*, 97 Cal. App. 3d at p. 586.) Thus, the Legislature expressly recognized that the categorically linked persons initially eligible for Medi-Cal did not constitute all "indigent persons" entitled to medical care under section 17000, and required the state to share in the financial responsibility for providing that care.

In adding adult MIP's to Medi-Cal in 1971, the Legislature extended Medi-Cal coverage to noncategorically linked persons "who [were] financially unable to pay for their medical care." (Legis. Counsel's Dig., Assem. Bill No. 949, 3 Stats. 1971 (Reg. Sess.) Summary Dig., p. 83.) This [*103] description was consistent with prior judicial decisions that, for purposes of a county's duty to provide "indigent persons" with hospitalization, [***156] had [**334] defined the term to include a person "who has insufficient means to pay for his maintenance in a private hospital after providing for those who legally claim his support." (*Goodall v. Brite* (1936) 11 Cal. App. 2d 540, 550 [54 P.2d 510].)

Moreover, the fate of amendments to section 17000 proposed at the same time suggests that, in the Legislature's view, the category of "indigent persons" entitled to medical care under section 17000 extended even *beyond* those eligible for Medi-Cal as MIP's. The June 17, 1971, version of Assembly Bill No. 949 amended section 17000 by adding the following: "however, the health needs of such persons shall be met under [Medi-Cal]." (Assem. Bill No. 949 (1971 Reg. Sess.) § 53.3, as amended June 17, 1971.) The Assembly deleted this amendment on July 20, 1971. (Assem. Bill No. 949 (1971 Reg. Sess.) as amended July 20, 1971, p. 37.) Regarding this change, the Assembly Committee on Health explained: "The proposed amendment to Section 17000, . . . which would have removed the counties' responsibilities as health care provider of last resort, is deleted. This change was originally proposed to clarify the guarantee to hold counties harmless from additional Medi-Cal costs. It is deleted since it cannot remove the fact that counties are, by definition, a 'last resort' for any person, with or without the means to pay, who does not qualify for federal or state aid." (Assem. Com. on Health, Analysis of Assem. Bill No. 949 (1971 Reg. Sess.) as amended July 20, 1971 (July 21, 1971), p. 4.)

The Legislature's failure to amend section 17000 in 1971 figured prominently in the Attorney General's interpretation of that section only two years later. In a 1973 published opinion, the Attorney General stated that the 1971 inclusion of MIP's in Medi-Cal "did not alter the duty of the counties to provide medical care to those indigents not eligible for Medi-Cal." (56 Ops.Cal.Atty.Gen., *supra*, at p. 569.) He based this conclusion on the 1971 legislation, relevant legislative history, and "the history of state medical care programs." (*Id.* at p. 570.) The opinion concluded: "The definition of medically indigent in [the chapter establishing Medi-Cal] is applicable only to that chapter and *does not include all those enumerated in section 17000*. If the former medical care program, by providing care only for a specific group, public assistance recipients, did not affect the responsibility of the counties to provide such service under section 17000, we believe the most recent expansion of the medical assistance program does not affect, *absent an express legislative intent to the contrary*, the duty of the counties under section 17000 to continue to provide services to those eligible under section 17000 but not under [Medi-Cal]." (*Ibid.*, italics added.) [HN28]The Attorney General's opinion, although not binding, is entitled to considerable weight. [*104] (*Freedom Newspapers, Inc. v. Orange County Employees Retirement System* (1993) 6 Cal. 4th 821, 829 [25 Cal. Rptr. 2d 148, 863 P.2d 218].) Absent controlling

authority, it is persuasive because we presume that the Legislature was cognizant of the Attorney General's construction of section 17000 and would have taken corrective action if it disagreed with that construction. (*California Assn. of Psychology Providers v. Rank* (1990) 51 Cal. 3d 1, 17 [270 Cal. Rptr. 796, 793 P.2d 2].)

In this case, of course, we need not (and do not) decide whether San Diego's obligation under section 17000 to provide medical care extended beyond adult MIP's. Our discussion establishes, however, that the obligation extended *at least* that far. The Legislature has made it clear that all adult MIP's are "indigent persons" under section 17000 for purposes of San Diego's obligation to provide medical care. Therefore, the state errs in arguing that San Diego had discretion to refuse to provide medical care to this population. [27]

> 27 Although asserting that nothing required San Diego to provide "all" adult MIP's with medical care, the state never precisely identifies which adult MIP's were legally entitled to medical care and which ones were not. Nor does the state ever directly assert that some adult MIP's were not "indigent persons" under section 17000. On the contrary, despite its argument, the state seems to suggest that San Diego's medical care obligation under section 17000 extended even beyond adult MIP's. It asserts: "At no time prior to or following 1983 did Medi-Cal ever provide medical services to, or pay for medical services provided to, all persons who could not afford such services and therefore might be deemed 'medically indigent.' . . . For some period prior to 1983, Medi-Cal paid for services for some indigent adults under its 'medically indigent adults' category. . . . [A]t no time did the state ever assume financial responsibility for all adults who are too indigent to afford health care." (Original emphasis.)

[**335] [***157] 2. *Service Standards*

(7) A number of statutes are relevant to the state's argument that San Diego had discretion in setting service standards. Section 17000 requires in general terms that counties "relieve and support" indigent persons. Section 10000, which sets forth the purpose of the division containing section 17000, declares the "legislative intent that aid shall be administered and services provided promptly and humanely, with due regard for the preservation of family life," so "as to encourage self-respect, self-reliance, and the desire to be a good citizen, useful to society." (§ 10000.) "[HN29]Section 17000, as authoritatively interpreted, mandates that medical care be provided to indigents and section 10000 requires that such care be provided promptly and humanely. The duty is mandated by statute. There is no discretion concerning whether to provide such care . . . ." (*Tailfeather v. Board of Supervisors* (1996) 48 Cal. App. 4th 1223, 1245 [56 Cal. Rptr. 2d 255] (*Tailfeather*).)

Courts construing section 17000 have held that [HN30]it "imposes a mandatory duty upon all counties to provide 'medically necessary care,' not just [*105] emergency care. [Citation.]" (*County of Alameda v. State Bd. of Control* (1993) 14 Cal. App. 4th 1096, 1108 [18 Cal. Rptr. 2d 487]; see also *Gardner v. County of Los Angeles* (1995) 34 Cal. App. 4th 200, 216 [40 Cal. Rptr. 2d 271]; § 16704.1 [prohibiting a county from requiring payment of a fee or charge "before [it] renders medically necessary services to . . . persons entitled to services under Section 17000"].) It further "ha[s] been interpreted . . . to impose a minimum standard of care below which the provision of medical services may not fall." (*Tailfeather, supra*, 48 Cal. App. 4th at p. 1239.) In *Tailfeather*, the court stated that "section 17000 requires provision of medical services to the poor at a level which does not lead to unnecessary suffering or endanger life and health . . . ." (*Id.* at p. 1240.) In reaching this conclusion, it cited *Cooke, supra*, 213 Cal. App. 3d at page 404, which held that section 17000 requires counties to provide "dental care sufficient to remedy substantial pain and infection." (See also § 14059.5 [defining "[a] service [as] 'medically necessary' . . . when it is reasonable and necessary to protect life, to prevent significant illness or significant disability, or to alleviate severe pain"].)

During the years for which San Diego sought reimbursement, Health and Safety Code section 1442.5, former subdivision (c) (former subdivision (c)), also spoke to the level of services that counties had to provide under Welfare and Institutions Code section 17000. [28] As enacted in September 1974, [HN31]former subdivision (c) provided that, whether a county's duty to provide care to all indigent people "is fulfilled directly by the county or through alternative means, the availability of services, and the quality of the treatment received by people who cannot afford to pay for their health care shall be the same as that available to nonindigent people receiving health care services in private facilities in that county." (Stats. 1974, ch. 810, § 3, p. 1765.) The express "purpose and intent" of the act that contained former subdivision (c) was "to insure that the duty of counties to provide health care to indigents [was] properly and continuously fulfilled." (Stats. 1974, ch. 810, § 1, p. 1764.) Thus, until its repeal in September 1992, [29] former subdivision (c) "[r]equire[d] that the availability and quality of services provided to indigents directly by the county or alternatively be the same as that available to nonindigents in private facilities in that county." (Legis. Counsel's Dig., Sen. Bill No. 2369, 2 Stats. 1974 (Reg. Sess.) Summary Dig., p. 130; see also *Gardner v.* [**336] [***158]

County of Los Angeles, supra, 34 Cal. App. 4th at p. 216; [*106] *Board of Supervisors v. Superior Court, supra*, 207 Cal. App. 3d at p. 564 [former subdivision (c) required that care provided "be *comparable* to that enjoyed by the nonindigent"].) [30] "For the 1990-91 fiscal year," the Legislature qualified this obligation by providing: "nothing in [former] subdivision (c) . . . shall require any county to exceed the standard of care provided by the state Medi-Cal program. Notwithstanding any other provision of law, counties shall not be required to increase eligibility or expand the scope of services in the 1990-91 fiscal year for their programs." (Stats. 1990, ch. 457, § 23, p. 2013.)

28 The state argues that former subdivision (c) is irrelevant to our determination because, like section 17000, it "predate[d] 1975." Our previous analysis rejecting this argument in connection with section 17000 applies here as well.

29 Statutes 1992, chapter 719, section 2, page 2882, repealed former subdivision (c) and enacted a new subdivision (c) in its place. This urgency measure was approved by the Governor on September 14, 1992, and filed with the Secretary of State on September 15, 1992.

30 [HN32]We disapprove *Cooke, supra*, 213 Cal. App. 3d at page 410, to the extent it held that Health and Safety Code section 1442.5, former subdivision (c), was merely "a limitation on a county's ability to close facilities or reduce services provided in those facilities," and was irrelevant absent a claim that a "county facility was closed [or] that any services in [the] county . . . were reduced." Although former subdivision (c) was contained in a section that dealt in part with closures and service reductions, nothing limited its reach to that context.

Although we have identified statutes relevant to service standards, we need not here define the precise contours of San Diego's statutory health care obligation. The state argues generally that San Diego had discretion regarding the services it provided. However, the state fails to identify either the specific services that San Diego provided under its CMS program or which of those services, if any, were not required under the governing statutes. Nor does the state argue that San Diego could have eliminated all services and complied with statutory requirements. Accordingly, we reject the state's argument that, because San Diego had some discretion in providing services, the 1982 legislation did not impose a reimbursable mandate. [31]

31 During further proceedings before the Commission to determine the amount of reimbursement due San Diego, the state may argue that particular services available under San Diego's CMS program exceeded statutory requirements.

VI. MINIMUM REQUIRED EXPENDITURE

(8) The Court of Appeal held that, under the governing statutes, the Commission must initially determine the precise amount of any reimbursement due San Diego. It therefore reversed the damages portion of the trial court's judgment and remanded the matter to the Commission for this determination. Nevertheless, the Court of Appeal affirmed the trial court's finding that the Legislature required San Diego to spend at least $ 41 million on its CMS program for fiscal years 1989-1990 and 1990-1991. In affirming this finding, the Court of Appeal relied primarily on section 16990, subdivision (a), as it read at all relevant times. The state contends this provision did not mandate that San Diego spend any minimum amount on the CMS program. It further asserts that the Court of Appeal's "ruling in effect sets a damages baseline, in contradiction to [its] ostensible reversal of the damage award."

[*107] Former section 16990, subdivision (a), set forth the financial maintenance-of-effort requirement for counties that received funding under the California Healthcare for the Indigent Program (CHIP). The Legislature enacted CHIP in 1989 to implement Proposition 99, the Tobacco Tax and Health Protection Act of 1988 (codified at Rev. & Tax. Code, § 30121 et seq.). Proposition 99, which the voters approved on November 8, 1988, increased the tax on tobacco products and allocated the resulting revenue in part to medical and hospital care for certain persons who could not afford those services. (*Kennedy Wholesale, Inc. v. State Bd. of Equalization* (1991) 53 Cal. 3d 245, 248, 254 [279 Cal. Rptr. 325, 806 P.2d 1360].) During the 1989-1990 and 1990-1991 fiscal years, [HN33]former section 16990, subdivision (a), required counties receiving CHIP funds, "at a minimum," to "maintain a level of financial support of county funds for health services at least equal to its county match and any overmatch of county funds in the 1988-89 fiscal year," adjusted annually as provided. (Stats. 1989, ch. 1331, § 9, p. 5427.) Applying this provision, the Court of Appeal affirmed the trial court's finding that the state had required San Diego to spend in fiscal years 1989-1990 and 1990-1991 [**337] [***159] at least $ 41 million on the CMS program.

We agree with the state that this finding is erroneous. Unlike participation in MISA, which was mandatory, participation in CHIP was voluntary. In establishing CHIP, the Legislature appropriated funds "for allocation to counties *participating* in" the program. (Stats. 1989, ch. 1331, § 10, p. 5436, italics added.) Section 16980, subdivision (a), directed the State Department of Health

Services to make CHIP payments "upon application of the county assuring that it will comply with" applicable provisions. Among the governing provisions were former sections 16990, subdivision (a), and 16995, subdivision (a), which provided: "To be eligible for receipt of funds under this chapter, a county may not impose more stringent eligibility standards for the receipt of benefits under Section 17000 or reduce the scope of benefits compared to those which were in effect on November 8, 1988." (Stats. 1989, ch. 1331, § 9, p. 5431.)

However, San Diego has cited no provision, and we have found none, that *required* eligible counties to participate in the program or apply for CHIP funds. Through Revenue and Taxation Code section 30125, which was part of Proposition 99, the electorate directed that funds raised through Proposition 99 "shall be used to supplement existing levels of service and not to fund existing levels of service." (See also Stats. 1989, ch. 1331, § 1, 19, pp. 5382, 5438.) Counties not wanting to supplement their existing levels of service, and which therefore did not want CHIP funds, were not bound by the program's requirements. Those counties, including San Diego, that chose [*108] to seek CHIP funds did so voluntarily. [32] Thus, the Court of Appeal erred in concluding that former section 16990, subdivision (a), mandated a minimum funding requirement for San Diego's CMS program.

> 32 Consistent with the electorate's direction, in its application for CHIP funds, San Diego assured the state that it would "[e]xpend [CHIP] funds only to supplement existing levels of services provided and not to fund existing levels of service . . . ." Because San Diego's initial decision to seek CHIP funds was voluntary, the evidence it cites of state threats to withhold CHIP funds if it eliminated the CMS program is irrelevant.

Nor did former section 16991, subdivision (a)(5), which the trial court and Court of Appeal also cited, establish a minimum financial obligation for San Diego's CMS program. Former section 16991 generally "establish[ed] a procedure for the allocation of funds to each county receiving funds from the [MISA] . . . for the provision of services to persons meeting certain Medi-Cal eligibility requirements, based on the percentage of newly legalized individuals under the federal Immigration Reform and Control Act (IRCA)." (Legis. Counsel's Dig., Assem. Bill No. 75, 4 Stats. 1989 (Reg. Sess.) Summary Dig., p. 548.) Former section 16991, subdivision (a)(5), required the state, for fiscal years 1989-1990 and 1990-1991, to reimburse a county if its combined allocation from various sources was less than the funding it received under section 16703 for fiscal year 1988-1989. [33] Nothing about this state reimbursement requirement imposed on San Diego a minimum funding requirement for its CMS program.

> 33 [HN34]Former section 16991, subdivision (a)(5), provided in full: "If the sum of funding that a county received from its allocation pursuant to Section 16703, the amount of reimbursement it received from federal State Legalization Impact Assistance Grant [(SLIAG)] funding for indigent care, and its share of funding provided in this section is less than the amount of funding the county received pursuant to Section 16703 in fiscal year 1988-89 the state shall reimburse the county for the amount of the difference. For the 1990-91 fiscal year, if the sum of funding received from its allocation, pursuant to Section 16703 and the amount of reimbursement it received from [SLIAG] Funding for indigent care that year is less than the amount of funding the county received pursuant to Section 16703 in the 1988-89 fiscal year, the state shall reimburse the amount of the difference. If the department determines that the county has not made reasonable efforts to document and claim federal SLIAG funding for indigent care, the department shall deny the reimbursement." (Stats. 1989, ch. 1331, § 9, p. 5428.)

Thus, we must reverse the judgment insofar as it finds that former sections 16990, subdivision (a), and 16991, subdivision (a)(5), established a $ 41 million spending floor for San Diego's CMS program. Instead, the various statutes that we have previously discussed (e.g., § 10000, 17000, and Health & [**338] [***160] Saf. Code, § 1442.5, former subd. (c)), the cases construing those statutes, and any other relevant authorities must guide the Commission's determination of the level of services that San Diego had to provide and any reimbursement to which it is entitled.

[*109] VII. REMAINING ISSUES

(9) The state raises a number of additional issues. It first complains that a mandamus proceeding under Code of Civil Procedure section 1085 was an improper vehicle for challenging the Commission's position. It asserts that, under Government Code section 17559, review by administrative mandamus under Code of Civil Procedure section 1094.5 is the exclusive method for challenging a Commission decision denying a mandate claim. The Court of Appeal rejected this argument, reasoning that the trial court had jurisdiction under Code of Civil Procedure section 1085 because, under section 6, the state has a ministerial duty of reimbursement when it imposes a mandate.

Like the Court of Appeal, but for different reasons, we reject the state's argument. [HN35]"[M]andamus pursuant to [Code of Civil Procedure] section 1094.5, commonly denominated 'administrative' mandamus, is mandamus still. It is not possessed of 'a separate and distinctive legal personality. It is not a remedy removed from the general law of mandamus or exempted from the latter's established principles, requirements and limitations.' [Citations.] The full panoply of rules applicable to 'ordinary' mandamus applies to 'administrative' mandamus proceedings, except where modified by statute. [Citations.]" (*Woods v. Superior Court* (1981) 28 Cal. 3d 668, 673-674 [170 Cal. Rptr. 484, 620 P.2d 1032].) Where the entitlement to mandamus relief is adequately alleged, a trial court may treat a proceeding brought under Code of Civil Procedure section 1085 as one brought under Code of Civil Procedure section 1094.5 and should deny a demurrer asserting that the wrong mandamus statute has been invoked. (*Woods, supra*, 28 Cal. 3d at pp. 673-674; *Anton v. San Antonio Community Hosp.* (1977) 19 Cal. 3d 802, 813-814 [140 Cal. Rptr. 442, 567 P.2d 1162].) Thus, even if San Diego identified the wrong mandamus statute, the error did not affect the trial court's ability to grant mandamus relief.

"In any event, distinctions between traditional and administrative mandate have little impact on this appeal . . . ." (*McIntosh v. Aubry* (1993) 14 Cal. App. 4th 1576, 1584 [18 Cal. Rptr. 2d 680].) [HN36]The determination whether the statutes here at issue established a mandate under section 6 is a question of law. (*County of Fresno v. Lehman, supra*, 229 Cal. App. 3d at p. 347.) In reaching our conclusion, we have relied on no facts that are in dispute. Where, as here, a "purely legal question" is at issue, courts "exercise independent judgment . . ., no matter whether the issue arises by traditional or administrative mandate. [Citations.]" (*McIntosh, supra*, 14 Cal. App. 4th at p. 1584.) As the state concedes, even under Code of Civil Procedure section 1094.5, a judgment must "be reversed if based on erroneous conclusions of law." Thus, any differences between the two mandamus statutes have had no impact on our analysis.

[*110] The state next contends that the trial court prejudicially erred in denying the "peremptory disqualification" motion that the Director of the Department of Finance filed under Code of Civil Procedure section 170.6. We will not review this ruling, however, because [HN37]it is reviewable only by writ of mandate under Code of Civil Procedure section 170.3, subdivision (d). (*People v. Webb* (1993) 6 Cal. 4th 494, 522-523 [24 Cal. Rptr. 2d 779, 862 P.2d 779]; *People v. Hull* (1991) 1 Cal. 4th 266 [2 Cal. Rptr. 2d 526, 820 P.2d 1036].)

Nor can we address the state's argument that the trial court erred in granting a preliminary injunction. The May 1991 order granting the [HN38]preliminary injunction was "immediately and separately appealable" under Code of Civil Procedure section 904.1, subdivision (a)(6). (*Art Movers, Inc. v. Ni West, Inc.* (1992) 3 Cal. App. 4th 640, 645 [4 Cal. Rptr. 2d 689].) Thus, the state's attempt to challenge the order in an appeal filed after entry of final judgment in December 1992 [**339] [***161] was untimely. [34] (See *Chico Feminist Women's Health Center v. Scully* (1989) 208 Cal. App. 3d 230, 251 [256 Cal. Rptr. 194].) Moreover, the state's attempt to appeal the order granting the preliminary injunction is moot because of (1) the trial court's July 1 order granting a peremptory writ of mandate, which expressly "supersede[d] and replace[d]" the preliminary injunction order and (2) entry of final judgment. (*Sheward v. Citizens' Water Co.* (1891) 90 Cal. 635, 638-639 [27 P. 439]; *People v. Morse* (1993) 21 Cal. App. 4th 259, 264-265 [25 Cal. Rptr. 2d 816]; *Art Movers, Inc., supra*, 3 Cal. App. 4th at p. 647.)

34 Despite its argument here, when it initially appealed, the state apparently recognized that it could no longer challenge the May 1991 order. In its March 1993 notice of appeal, it appealed only from the judgment entered December 18, 1992, and did not mention the May 1991 order.

Finally, the state requests that we reverse the trial court's reservation of jurisdiction regarding an award of attorney fees. This request is premature. In the judgment, the trial court "retain[ed] jurisdiction to determine any right to and amount of attorneys' fees . . . ." This provision does not declare that San Diego in fact has a right to an award of attorney fees. Nor has San Diego asserted such a right. As San Diego states, at this point, "[t]here is nothing for this Court to review." We will not give an advisory ruling on this issue.

VIII. DISPOSITION

The judgment of the Court of Appeal is affirmed insofar as it holds that the exclusion of adult MIP's from Medi-Cal imposed a mandate on San Diego within the meaning of section 6. The judgment is reversed insofar as it holds that the state required San Diego to spend at least $ 41 million on the CMS program in fiscal years 1989-1990 and 1990-1991. The matter is [*111] remanded to the Commission to determine whether, and by what amount, the statutory standards of care (e.g., Health & Saf. Code, § 1442.5, former subd. (c); Welf. & Inst. Code, § 10000, 17000) forced San Diego to incur costs in excess of the funds provided by the state, and to determine the statutory remedies to which San Diego is entitled.

George, C. J., Mosk, J., Baxter, J., Anderson, J., * and Aldrich, J., ** concurred.

* Presiding Justice, Court of Appeal, First Appellate District, Division Four, assigned by the Chief Justice pursuant to article VI, section 6 of the California Constitution.

** Associate Justice, Court of Appeal, Second Appellate District, Division Three, assigned by the Chief Justice pursuant to article VI, section 6 of the California Constitution.

DISSENT BY: KENNARD

DISSENT

KENNARD, J.

I dissent.

As part of an initiative measure placing spending limits on state and local government, the voters in 1979 added article XIII B to the California Constitution. Section 6 of this article provides that when the state "mandates a new program or higher level of service on any local government," the state must reimburse the local government for the cost of such program or service. Under subdivision (c) of this constitutional provision, however, the state "may, but need not," provide such reimbursement *if the state mandate was enacted before January 1, 1975.* (Cal. Const., art. XIII B, § 6, subd. (c).) Subdivision (c) is the critical provision here.

Because the counties have for many decades been under a state mandate to provide for the poor, a mandate that existed before the voters added article XIII B to the state Constitution, the express language of subdivision (c) of section 6 of article XIII B exempts the state from any *legal obligation* to reimburse the counties for the cost of medical care to the needy. The fact that for a certain period after 1975 the state directly paid under the state Medi-Cal program for these costs did not lead to the creation of a new mandate once the state stopped doing so. To hold to the contrary, as the majority does, is to render subdivision (c) a nullity.

The issue here is not whether the poor are entitled to medical care. They are. The issue is whether the state or the counties must pay for this care. The majority places this obligation on the state. The counties' [**340] [***162] win, however, may be a pyrrhic victory. For, in anticipation of today's decision, the Legislature has enacted legislation that will drastically reduce the counties' share of other state revenue, as discussed in part III below.

I

Beginning in 1855, California imposed a legal obligation on the counties to take care of their poor. (*Mooney v. Pickett* (1971) 4 Cal. 3d 669, 677-678 [*112] [94 Cal. Rptr. 279, 483 P.2d 1231].) Since 1965, this obligation has been codified in Welfare and Institutions Code section 17000. (Stats. 1965, ch. 1784, § 5, p. 4090.) That statute states in full: "Every county and every city and county shall relieve and support all incompetent, poor, indigent persons, and those incapacitated by age, disease, or accident, lawfully resident therein, when such persons are not supported and relieved by their relatives or friends, by their own means, or by state hospitals or other state or private institutions." (Welf. & Inst. Code, § 17000.) Included in this is a duty to provide medical care to indigents. (*Board of Supervisors v. Superior Court* (1989) 207 Cal. App. 3d 552, 557 [254 Cal. Rptr. 905].)

A brief overview of the efforts by federal, state, and local governments to furnish medical services to the poor may be helpful.

Before March 1, 1966, the date on which California began its Medi-Cal program, medical services for the poor "were provided in different ways and were funded by the state, county, and federal governments in varying amounts." (Assem. Com. on Public Health, Preliminary Rep. on Medi-Cal (Feb. 29, 1968) p. 3.) The Medi-Cal program, which California adopted to implement the federal Medicaid program (42 U.S.C. § 1396 et seq.; see *Morris v. Williams* (1967) 67 Cal. 2d 733, 738 [63 Cal. Rptr. 689, 433 P.2d 697]), at first limited eligibility to those persons "linked" to a federal categorical aid program by being over age 65, blind, disabled, or a member of a family with dependent children. (Legis. Analyst, Rep. to Joint Legis. Budget Com., Analysis of 1971-1972 Budget Bill, Sen. Bill No. 207 (1971 Reg. Sess.), pp. 548, 550.) Persons not linked to federal programs were ineligible for Medi-Cal; they could obtain medical care from the counties. (*County of Santa Clara v. Hall* (1972) 23 Cal. App. 3d 1059, 1061 [100 Cal. Rptr. 629].)

In 1971, the Legislature revised Medi-Cal by extending coverage to certain so-called "noncategorically linked" persons, or "medically indigent persons." (Stats. 1971, ch. 577, § 12, 13, 22.5, 23, pp. 1110-1111, 1115.) The revisions included a formula for determining each county's share of Medi-Cal costs for the 1972-1973 fiscal year, with increases in later years based on the assessed value of property. (*Id.* at § 41, 42, pp. 1131-1133.)

In 1978, California voters added to the state Constitution article XIII A (Proposition 13), which severely limited property taxes. In that same year, to help the counties deal with the drastic drop in local tax revenue, the Legislature assumed the counties' share of Medi-Cal costs. (Stats. 1978, ch. 292, § 33, p. 610.) In 1979, the Legislature relieved the counties of their obligation to share in Medi-Cal costs. (Stats. 1979, ch. 282, § 106, p. 1059.) [*113] Also in 1979, the voters added to the state Constitution article XIII B, which placed spending

limits on state and local governments and added the mandate/reimbursement provisions at issue here.

In 1982, the Legislature removed from Medi-Cal eligibility the category of "medically indigent persons" that had been added in 1971. The Legislature also transferred funds for indigent health care services from the state to the counties through the Medically Indigent Services Account. (Stats. 1982, ch. 328, § 6, 8.3, 8.5, pp. 1574-1576; Stats. 1982, ch. 1594, § 19, 86, pp. 6315, 6357.) Medically Indigent Services Account funds were then combined with county health service funds to provide health care to persons not eligible for Medi-Cal (Stats. 1982, ch. 1594, § 86, p. 6357), and counties were to provide health services to persons in this category "to the extent that state funds are provided" (*id.*, § 70, p. 6346).

From 1983 through June 1989, the state fully funded San Diego County's program for furnishing medical care to the poor. Thereafter, in fiscal years 1989-1990 and 1990-1991, the state partially funded San Diego [**341] [***163] County's program. In early 1991, however, the state refused to provide San Diego County full funding for the 1990-1991 fiscal year, prompting a threat by the county to terminate its indigent medical care program. This in turn led the Legal Aid Society of San Diego to file an action against the County of San Diego, asserting that Welfare and Institutions Code section 17000 imposed a legal obligation on the county to provide medical care to the poor. The county cross-complained against the state. The county argued that the state's 1982 removal of the category of "medically indigent persons" from Medi-Cal eligibility mandated a "new program or higher level of service" within the meaning of section 6 of article XIII B of the California Constitution, because it transferred the cost of caring for these persons to the county. Accordingly, the county contended, section 6 required the state to reimburse the county for its cost of providing such care, and prohibited the state from terminating reimbursement as it did in 1991. The county eventually reached a settlement with the Legal Aid Society of San Diego, leading to a dismissal of the latter's complaint.

While the County of San Diego's case against the state was pending, litigation was proceeding in a similar action against the state by the County of Los Angeles and the County of San Bernardino. In that action, the Superior Court for the County of Los Angeles entered a judgment in favor of Los Angeles and San Bernardino Counties. The state sought review in the Second District Court of Appeal in Los Angeles. In December 1992, the parties to the Los Angeles case entered into a settlement agreement providing for dismissal of the appeal and vacating of the superior court judgment. [*114] The Court of Appeal thereafter ordered that the superior court judgment be vacated and that the appeal be dismissed.

The County of San Diego's action against the state, however, was not settled. It proceeded on the county's claim against the state for reimbursement of the county's expenditures for medical care to the indigent. [1] The majority holds that the county is entitled to such reimbursement. I disagree.

1 I agree with the majority that the superior court had jurisdiction to decide this case. (Maj. opn., *ante*, at pp. 85-90.)

II

Article XIII B, section 6 of the California Constitution provides: "Whenever the Legislature or any state agency mandates a new program or higher level of service on any local government, the state shall provide a subvention of funds to reimburse such local government for the costs of such program or increased level of service, *except that the Legislature may, but need not, provide such subvention of funds for the following mandates:* [P] . . . [P] *(c) Legislative mandates enacted prior to January 1, 1975, or executive orders or regulations initially implementing legislation enacted prior to January 1, 1975.*" (Italics added.) [2]

2 Section 6 of article XIII B pertains to two types of mandates: new programs and higher levels of service. The words "such subvention" in the first paragraph of this constitutional provision makes the subdivision (c) exemption applicable to both types of mandates.

Of importance here is Welfare and Institutions Code section 17000 (hereafter sometimes section 17000). It imposes a legal obligation on the counties to provide, among other things, medical services to the poor. (*Board of Supervisors* v. *Superior Court*, *supra*, 207 Cal. App. 3d at p. 557; *County of San Diego v. Viloria* (1969) 276 Cal. App. 2d 350, 352 [80 Cal. Rptr. 869].) Section 17000 was enacted long before, and has existed continuously since, January 1, 1975, the date set forth in subdivision (c) of section 6 of article XIII B of the California Constitution. Thus, section 17000 falls within subdivision (c)'s language of "[l]egislative mandates enacted prior to January 1, 1975," rendering it exempt from the reimbursement provision of section 6.

Contrary to the majority's conclusion, the Legislature's 1982 legislation removing the category of "medically indigent persons" from Medi-Cal did not meet California Constitution, article XIII B, section 6's requirement of imposing on local government "a new program or higher level of service," and therefore did not entitle the counties to reimbursement [**342] [***164]

from the state under section 6 of article XIII B. The counties' legal obligation to provide medical care arises from section 17000, not from the subsequently enacted [*115] 1982 legislation. The majority itself concedes that the 1982 legislation merely "trigger[ed] the counties' responsibility to provide medical care as providers of last resort under section 17000." (Maj. opn., *ante*, at p. 98.) Although certain actions by the state and the federal government during the 1970's and 1980's may have alleviated the counties' financial burden of providing medical care for the indigent, those actions did not supplant or remove the counties' existing legal obligation under section 17000 to furnish such care. (*Cooke v. Superior Court* (1989) 213 Cal. App. 3d 401, 411 [261 Cal. Rptr. 706]; *Madera Community Hospital v. County of Madera* (1984) 155 Cal. App. 3d 136, 151 [201 Cal. Rptr. 768].)

The state's reimbursement obligation under section 6 of article XIII B of the California Constitution arises only if, after January 1, 1975, the date mentioned in subdivision (c) of section 6, the state imposes on the counties "a new program or higher level of service." That did not occur here. As I pointed out above, the counties' legal obligation to provide for the poor arises from section 17000, enacted long before the January 1, 1975, cutoff date set forth in subdivision (c) of section 6. That statutory obligation remained in effect when, during a certain period after 1975, the state assumed the financial burden of providing medical care to the poor, in an effort to help the counties deal with a drastic drop in local revenue as a result of the voters' passage of Proposition 13, which severely limited property taxes. Because the counties' statutory obligation to provide health care to the poor was created before 1975 and has existed unchanged since that time, the state's 1982 termination of Medi-Cal eligibility for "medically indigent persons" did not create a "new program or higher level of service" within the meaning of section 6 of article XIII B, and therefore did not obligate the state to reimburse the counties for their expenditures in health care for the poor.

III

In imposing on the state a legal obligation to reimburse the counties for their cost of furnishing medical services to the poor, the majority's holding appears to bail out financially strapped counties. Not so.

Today's decision will immediately result in a reduction of state funds available to the counties. Here is why. In 1991, the Legislature added section 11001.5 to the Revenue and Taxation Code, providing that 24.33 percent of the moneys collected by the Department of Motor Vehicles as motor vehicle license fees must be deposited in the State Treasury to the credit of the Local Revenue Fund. In anticipation of today's decision, the Legislature stated in subdivision (d) of this statute: "This section shall cease to be operative on [*116] the first day of the month following the month in which the Department of Motor Vehicles is notified by the Department of Finance of a final judicial determination by the California Supreme Court or any California court of appeal [that]: [P] . . . [P] (2) The state is obligated to reimburse counties for costs of providing medical services to medically indigent adults pursuant to Chapters 328 and 1594 of the Statutes of 1982." (Rev. & Tax. Code, § 11001.5, subd. (d); see also *id.*, § 10753.8, subd. (b).)

The loss of such revenue, which the Attorney General estimates at "hundreds of millions of dollars," may put the counties in a serious financial bind. Indeed, realization of the scope of this revenue loss appears to explain why the County of Los Angeles, after a superior court victory in its action seeking state reimbursement for the cost of furnishing medical care to "medically indigent persons," entered into a settlement with the state under which the superior court judgment was effectively obliterated by a stipulated reversal. (See *Neary v. Regents of University of California* (1992) 3 Cal. 4th 273 [10 Cal. Rptr. 2d 859, 834 P.2d 119].) In a letter addressed to the Second District Court of Appeal, sent while the County of Los Angeles was engaged in settlement negotiations with the state, the county's attorney referred to the legislation mentioned above in these terms: "This legislation was quite clearly written with this case in mind. Consequently, [**343] [***165] to pursue this matter, *the County of Los Angeles risks losing a funding source it must have to maintain its health services programs at current levels.* The additional funding that might flow to the County from a final judgment in its favor in this matter, is several years away *and is most likely of a lesser amount than this County's share of the vehicle license fees.*" (Italics added.) Thus, the County of Los Angeles had apparently determined that a legal victory entitling it to reimbursement from the state for the cost of providing medical care to the category of "medically indigent persons" would not in fact serve its economic interests.

I have an additional concern. According to the majority, whenever there is a change in a state program that has the effect of increasing a county's financial burden under section 17000 there must be reimbursement by the state. This means that so long as section 17000 continues to exist, an increase in state funding to a particular county for the care of the poor, once undertaken, may be irreversible, thus locking the state into perpetual financial assistance to that county for health care to the needy. This would, understandably, be a major disincentive for the Legislature to ever increase the state's funding of a county's medical care for the poor.

The rigidity imposed by today's holding will have unfortunate consequences should the state's limited fi-

nancial resources prove insufficient to [*117] reimburse the counties under section 6 of article XIII B of the California Constitution for the "new program or higher level of service" of providing medical care to the poor under section 17000. In that event, the state may be required to modify this "new program or higher level of service" in order to reconcile the state's reimbursement obligation with its finite resources and its other financial commitments. Such modifications are likely to take the form of limitations on eligibility for medical care or on the amount or kinds of medical care that the counties must provide to the poor under section 17000. A more flexible system--one that actively encouraged shared state and county responsibility for indigent medical care, using a variety of innovative funding mechanisms--would be less likely to result in a curtailment of medical services to the poor.

And if the Legislature is unable or unwilling to appropriate funds to comply with the majority's reimbursement order, the law allows the county to file "in the Superior Court of the County of Sacramento an action in declaratory relief to declare the mandate unenforceable and enjoin its enforcement." (Gov. Code, § 17612, subd. (c); see maj. opn., *ante*, at p. 82.) Such a declaration would do nothing to alleviate the plight of the poor.

Conclusion

The dispute in this case ultimately arises from a collision between the taxing limitations on the counties imposed by article XIII A of the state Constitution and the preexisting, open-ended mandate imposed on them under Welfare and Institutions Code section 17000 to provide medical care for the poor. As I have explained, the Legislature's assumption thereafter of some of the resulting financial burden to the counties did not repeal section 17000's mandate, nor did the Legislature's later termination of its financial support create a new mandate. In holding to the contrary, the majority imposes on the Legislature an obligation that the Legislature does not have under the law.

I recognize that my resolution of this issue--that under existing law the state has *no legal obligation* to reimburse the counties for health expenditures for the poor--would leave the counties in the same difficult position in which they find themselves now: providing funding for indigent medical care while maintaining other essential public services in a time of fiscal austerity. But complex policy questions such as the structuring and funding of indigent medical care are best left to the counties, the Legislature, and ultimately the electorate, rather than to the courts. It is the counties that must figure out how to allocate the limited budgets imposed on them by the electorate's adoption of articles XIII A and XIII B of the California Constitution among indigent medical care programs and a host of other pressing [*118] and essential needs. It is the Legislature that must decide whether to furnish financial assistance to the counties so [***166] they [**344] can meet their section 17000 obligations to provide for the poor, and whether to continue to impose the obligations of section 17000 on the counties. It is the electorate that must decide whether, given the ever-increasing costs of meeting the needs of indigents under section 17000, counties should be afforded some relief from the taxing and spending limits of articles XIII A and XIII B, both enacted by voters' initiative. These are hard choices, but for the reasons just given they are better made by the representative branches of government and the electorate than by the courts.

TAB "14"

LEXSEE

Positive
As of: Jun 25, 2010

DEPARTMENT OF FINANCE, Plaintiff and Appellant, v. COMMISSION ON STATE MANDATES, Defendant and Respondent; KERN HIGH SCHOOL DISTRICT et al., Real Parties in Interest and Respondents.

No. S109219.

SUPREME COURT OF CALIFORNIA

30 Cal. 4th 727; 68 P.3d 1203; 134 Cal. Rptr. 2d 237; 2003 Cal. LEXIS 3353; 2003 Daily Journal DAR 5463

May 22, 2003, Decided
May 22, 2003, Filed

PRIOR HISTORY: Superior Court of Sacramento County, No. C037645, No. 00CS00866, Ronald B. Robie Judge.
Department of Finance v. Commission on State Mandates, 100 Cal. App. 4th 243, 2002 Cal. App. LEXIS 4406, 122 Cal. Rptr. 2d 447 (Cal. App. 3d Dist., 2002)

DISPOSITION: The judgment of the Court of Appeal is reversed.

CASE SUMMARY:

PROCEDURAL POSTURE: The Court of Appeal of California, Third Appellate District, Sacramento County, held that respondents, California Commission on State Mandates, representing the real parties in interest and respondent school districts, had a right to reimbursement for their costs in complying with the statutory notice and agenda requirements related to voluntary state education-related programs. Appellant, the California Department of Finance, sought review.

OVERVIEW: A number of statutes established various school-related educational programs. One example was the School-Based Pupil Motivation and Maintenance Program and Dropout Recovery Act, Cal. Educ. Code § 54720 et seq. Participating school districts were granted funds to operate such programs and were required to establish school site councils or advisory committees to administer the program. Subsequent legislation required new statutory notice and agenda requirements related to public meetings concerning such programs. The department of finance asserted that, because local entities were not required to participate in the programs, the State, had not imposed a "mandate," and the State was not responsible for said notice and agenda costs. On the other hand, the commission asserted the school districts were legally "compelled" to incur such costs and were entitled to reimbursement. The appellate court held the school districts did not have a right to reimbursement from the State. The funded programs did not amount to a reimbursable state mandate, they were not "compelled" upon the districts, and a portion of the provided funds could be used for the notice and agenda costs at issue.

OUTCOME: The appellate court held that the claimants failed to establish that they were entitled to reimbursement with regard to any of the program costs issue. The judgment of the lower court was reversed.

CORE TERMS: claimant, school districts, state mandate, agenda, notice, reimbursable, reimbursement, compelled, funded, incur, compulsion, advisory committees, local governments, local entity, local agencies, italics, eminent domain, mandated, curiae, school site, funding, optional, taxation, spending, goodwill, entity's, elect, reasonable alternative, federal mandate, education programs

LexisNexis(R) Headnotes

Education Law > Funding > Allocation
Education Law > Instruction > Curricula > Curriculum Committees
Public Health & Welfare Law > Social Services > Native Americans
[HN1]A number of statutes establish various school-related educational programs, such as the School-Based Pupil Motivation and Maintenance Program and Dropout Recovery Act, Cal. Educ. Code § 54720 et seq., Programs to Encourage Parental Involvement, Cal. Educ. Code § 11500 et seq., and the federal Indian Education Program, 20 U.S.C.S. § 7421 et seq. (former 25 U.S.C.S. § 2604 et seq. Under these statutes, participating school districts are granted state or federal funds to operate the program, and are required to establish school site councils or advisory committees that help administer the program. Program funding often is substantial. Funding is provided by the state for school improvement programs, at least in-part, under Cal. Educ. Code §§ 52010 et seq., and Cal. Educ. Code §§ 62000, 62000.2(b) and 62002.

Administrative Law > Governmental Information > Public Meetings > General Overview
Education Law > Administration & Operation > Boards of Elementary & Secondary Schools > Proceedings
[HN2] Cal. Educ. Code § 35147 generally exempts school district councils and advisory committees of nine specific programs from compliance with all provisions of the Brown Act, Cal. Gov't. Code § 54950.5 et seq, and imposes instead its own separately described requirement that all such councils and advisory committees related to those nine programs be open to the public, provide notice of meetings, and post meeting agendas.

Governments > Local Governments > Administrative Boards
[HN3]See Cal. Gov't. Code § 54952.

Administrative Law > Governmental Information > Public Meetings > General Overview
Education Law > Administration & Operation > Boards of Elementary & Secondary Schools > Proceedings
Governments > Local Governments > Administrative Boards
[HN4]See Cal. Educ. Code § 35147.

Education Law > Administration & Operation > Boards of Elementary & Secondary Schools > Proceedings
Education Law > Funding > Allocation
Governments > State & Territorial Governments > Finance
[HN5]The statutory notice and agenda requirements of Cal. Educ. Code § 35147 impose reimbursable state mandates for the costs of preparing meeting agendas, posting agendas, and providing the public an opportunity to address the respective school district councils or committees.

Governments > Local Governments > Finance
Governments > State & Territorial Governments > Finance
[HN6]Cal. Const. art. XIII A limits the spending authority of state and local government.

Governments > Local Governments > Finance
Governments > State & Territorial Governments > Finance
[HN7]See Cal. Const. art. XIII B, § 6.

Education Law > Administration & Operation > School Districts > Financial Liabilities
Governments > Local Governments > Finance
Governments > State & Territorial Governments > Finance
[HN8]Cal. Const. art. XIII B, § 6 recognizes that Cal. Const. arts. XIII A and XIII B severely restrict the taxing and spending powers of local governments. Its purpose is to preclude the state from shifting financial responsibility for carrying out governmental functions to local agencies, which are "ill equipped" to assume increased financial responsibilities because of the taxing and spending limitations that Cal. Const. arts. XIII A and XIII B impose. A reimbursable state mandate does not arise merely because a local entity finds itself bearing an "additional cost" imposed by state law. The additional expense incurred by a local agency or school district arising as an incidental impact of a law which applied generally to all entities is not the type of expense that the voters had in mind when they adopted Cal. Const. art. XIII B, § 6.

Governments > Local Governments > Administrative Boards
Governments > Local Governments > Finance
Governments > State & Territorial Governments > Finance

[HN9]Extension of the subvention requirements to costs "incidentally" imposed on local governments will require the legislature to assess the fiscal effect on local agencies of each law of general application. Moreover, it will subject much general legislation to the supermajority vote required to pass a companion local-government revenue bill. Each such necessary appropriation will, in turn, cut into the state's article Cal. Const. art. XIII B spending limit. Cal. Const. art. XIII B, § 8(a). Nothing in the language, history, or apparent purpose of Cal. Const. art. XIII B suggests such far-reaching limitations on legitimate state power.

Governments > Local Governments > Administrative Boards
Governments > Local Governments > Finance
Governments > State & Territorial Governments > Finance
[HN10]See former Cal. Rev. & Tax Code § 2231(a) (currently Cal. Gov't. Code § 17561(a)).

Governments > Local Governments > Administrative Boards
Governments > Local Governments > Finance
Governments > State & Territorial Governments > Finance
[HN11]See former Rev. § Tax Code § 2207 (currently Cal. Gov't. Code § 17514).

Governments > Local Governments > Finance
Governments > State & Territorial Governments > Finance
[HN12]See former Cal. Rev. & Tax Code § 2207(h).

Education Law > Funding > Allocation
Governments > Local Governments > Finance
Governments > State & Territorial Governments > Finance
[HN13]See former Cal. Rev. & Tax Code § 2207.5.

Governments > Local Governments > Finance
[HN14]Former Cal. Rev. and Tax. Code §§ 2231 and 2207 served as the model for Cal. Const. art. XIII B, § 6, and contemplated a narrow definition of reimbursable state mandate, and not the subsequently expanded definition of reimbursable state mandate found in the 1981 amendments to the California Revenue and Taxation Code.

Education Law > Administration & Operation > School Districts > Financial Liabilities
Education Law > Instruction > Curricula > Standards
Governments > State & Territorial Governments > Finance
[HN15]See Cal. Gov't Code § 17514.

Governments > Local Governments > Finance
Governments > State & Territorial Governments > Finance
Tax Law > State & Local Taxes > General Overview
[HN16]In the legislature's 1984 overhaul of the statutory scheme implementing Cal. Const. art. XIII B, § 6, the legislature embraced and codified the narrow definition of reimbursable state mandate set out in former Cal. Rev. & Tax Code § 2207 (and construed in City of Merced) as the appropriate test in implementing the constitutional provision. The legislature limited the continued use of the broader definition of a statutorily imposed reimbursable state mandate (set out in the amendments to former Cal. Rev. & Tax Code §§ 2207 and 2207.5, effective in mid-1981) to a small and ever-decreasing number of cases. Five years later, the legislature repealed former Cal. Rev. & Tax Code §§ 2207 and 2207.5, thereby finally discarding the broad definition of statutorily imposed reimbursable state mandate found in former Cal. Rev. & Tax Code §§ 2207(h) and 2207.5(h).

Education Law > Administration & Operation > School Districts > Financial Liabilities
Governments > Local Governments > Finance
Governments > State & Territorial Governments > Finance
[HN17]Particularly in the context of school funding, based upon the language of Cal. Const. art. XIII B, § 6, and the statutory and case law history, the drafters and the electorate must have intended that a reimbursable state mandate arises only if a local entity is "required" or "commanded," that is, legally compelled to participate in a program (or to provide a service) that, in turn, leads unavoidably to increasing the costs incurred by the entity.

Education Law > Administration & Operation > School Districts > Financial Liabilities
Governments > Local Governments > Finance
Governments > State & Territorial Governments > Finance
[HN18]Particularly in the context of school funding, activities undertaken at the option or discretion of a local government entity (that is, actions undertaken without any legal compulsion or threat of penalty for nonpartici-

pation) do not trigger a state mandate and hence do not require reimbursement of funds, even if the local entity is obliged to incur costs as a result of its discretionary decision to participate in a particular program or practice.

Education Law > Administration & Operation > Boards of Elementary & Secondary Schools > Proceedings
Education Law > Administration & Operation > School Districts > Financial Liabilities
Real Property Law > Eminent Domain Proceedings > Constitutional Limits & Rights > Just Compensation
[HN19]If a school district elects to participate in or continue participation in any underlying voluntary education-related funded program, the district's obligation to comply with the notice and agenda requirements of Cal. Educ. Code § 35147, as related to that program does not constitute a reimbursable state mandate.

Education Law > Administration & Operation > School Districts > Financial Liabilities
Governments > State & Territorial Governments > Finance
[HN20]In the context of school district financing, the proper focus under a legal compulsion inquiry is upon the nature of a claimant's participation in the underlying programs themselves.

Education Law > Funding > Allocation
Governments > Local Governments > Finance
Public Health & Welfare Law > Social Services > Native Americans
[HN21]The American Indian Early Childhood Education Program, Cal. Educ. Code § 52060 et seq., which implements projects designed to develop and test educational models to increase reading and math competence of students in preschool and early grades, states that school districts "may apply" to be included in the project, Cal. Educ. Code § 52063) and, if accepted to participate, will receive program funding. Cal. Educ. Code § 52062. Cal. Educ. Code § 52065 in turn states that each school district that receives funds provided by § 52062 shall establish a district wide American Indian advisory committee for American Indian early childhood education.

Education Law > Administration & Operation > Boards of Elementary & Secondary Schools > Authority
Education Law > Administration & Operation > School Districts > Financial Liabilities
Governments > State & Territorial Governments > Finance
[HN22]Participation in most of the programs listed in Cal. Educ. Code § 35147 is voluntary, and the obligation to establish or maintain a site council or advisory committee arises only if a district elects to participate in, or continue to participate in, the particular program.

Education Law > Administration & Operation > Boards of Elementary & Secondary Schools > Authority
Education Law > Administration & Operation > Boards of Elementary & Secondary Schools > Proceedings
Education Law > Instruction > Curricula > Curriculum Committees
[HN23]See Cal. Educ. Code § 52010.

Education Law > Administration & Operation > Boards of Elementary & Secondary Schools > Authority
Education Law > Administration & Operation > Boards of Elementary & Secondary Schools > Proceedings
Education Law > Instruction > Curricula > Curriculum Committees
[HN24]Reasonably construed, the statutory scheme require only that a school district adopt "policies" (i.e., a plan) "to ensure" that if the district elects to participate in the California School Improvement Program, a school site council will, "prior to phase-in" of the district wide program, exist at each school, so that each individual school will be able to decide whether it wishes to participate in the district's program. In other words, the statutory scheme require that districts adopt policies or plans for school site councils, but the statutes do not require that districts adopt councils themselves unless the district first elects to participate in the underlying program.

Education Law > Administration & Operation > Boards of Elementary & Secondary Schools > Authority
Education Law > Instruction > Curricula > Curriculum Committees
[HN25]Prior to a school beginning to develop a program plan, the district first must establish a local school site council that in turn will consider whether or not it wishes the local school to participate in the program. Cal. Educ. Code § 52850 et seq. and Cal. Educ. Code § 54720 et seq. The statutes make it clear that these requirements apply "only to school districts and schools which participate in" the respective programs. Cal. Educ. Code §§

52850, 54722. Each statutory scheme provides that school site councils shall be established at each school which participates in the program. Cal. Educ. Code §§ 52852 and 54722.

Education Law > Funding > Allocation
Education Law > Students > Bilingual Students
Governments > Local Governments > Finance
[HN26]The appellate court finds nothing to suggest that a school district is precluded from using a portion of the funds obtained from the state for the implementation of an underlying funded program to pay associated notice and agenda costs. Indeed, the Chacon-Moscone Bilingual-Bicultural Education program explicitly authorizes school districts to do so. Under Cal. Educ. Code § 52168(b) school districts may claim funds appropriated for purposes of expenditures in, but not limited to reasonable district administrative expenses. It is plain that the costs of complying with program-related notice and agenda requirements qualify as "reasonable district administrative expenses." Therefore, even if the appellate court assume for purposes of analysis that school districts are legally compelled to participate in the funded Chacon-Moscone Bilingual-Bicultural Education program, the appellate court views the state's provision of program funding as satisfying, in advance, any reimbursement requirement.

Education Law > Administration & Operation > School Districts > Financial Liabilities
Governments > Local Governments > Finance
Governments > State & Territorial Governments > Finance
[HN27]It is conceivable, with regard to some programs, that increased compliance costs imposed by the state might become so great, or funded program grants might become so diminished, that funded program benefits would not cover the compliance costs, or that expenditure of granted program funds on administrative costs might violate a spending limitation set out in applicable regulations or statutes. In those circumstances, a compulsory program participant likely would be able to establish the existence of a reimbursable state mandate under Cal. Const. art. XIII B, § 6.

Governments > Local Governments > Finance
Governments > State & Territorial Governments > Finance
[HN28]See Cal. Const. art. XIII B, § 9.

Governments > Legislation > Interpretation
[HN29]It is well settled that constitutional enactments must receive a liberal, practical common-sense construction which will meet changed conditions and the growing needs of the people. While a constitutional amendment should be construed in accordance with the natural and ordinary meaning of its words, the literal language of enactments may be disregarded to avoid absurd results and to fulfill the apparent intent of the framers.

Education Law > Administration & Operation > School Districts > Creation
Governments > Local Governments > Administrative Boards
Governments > State & Territorial Governments > Relations With Governments
[HN30]Unlike the federal-state relationship, sovereignty is not an issue between state and local governments. School districts are agencies of the state, and not separate or distinct political entities.

Governments > Local Governments > Finance
Governments > State & Territorial Governments > Finance
[HN31]Cal. Const. art. XIII B, § 6's purpose is to preclude the state from shifting financial responsibility for carrying out governmental functions to local agencies, which are "ill equipped" to assume increased financial responsibilities. In light of that purpose, the appellate court does not foreclose the possibility that a reimbursable state mandate under Cal. Const. art. XIII B, § 6, properly might be found in some circumstances in which a local entity is not legally compelled to participate in a program that requires it to expend additional funds.

Education Law > Students > Bilingual Students
Governments > Local Governments > Finance
Public Health & Welfare Law > Social Services > Native Americans
[HN32]Authority to use program funds obtained from the state to pay associated notice and agenda costs is explicit, or at least strongly implied in the federal Indian Education Program, 20 U.S.C.S. § 7425(d), the California School Improvement Program, Cal. Educ. Code § 63000(c) and (g), and the McAteer Act, Cal. Educ. Code § 63001.

Education Law > Administration & Operation > Boards of Elementary & Secondary Schools > Proceedings
Governments > State & Territorial Governments > Finance

[HN33]In the context of the expenditure of granted program funds on the notice and agenda costs, applicable statutory provisions appear to set the limit for such expenses for the same program at no more than 15 percent of granted program funds. Cal. Educ. Code §§ 63000(c) and 63001.

Education Law > Administration & Operation > School Districts > Financial Liabilities
Education Law > Funding > Allocation
Governments > State & Territorial Governments > Finance
[HN34]Presumably, a school district will continue to participate in optional funded programs only if it determines that the best interests of the district and its students are served by participation. In other words, if, on balance, the funded program, even with strings attached, is deemed beneficial. And, presumably, a school district will decline participation if and when it determines that the costs of program compliance outweigh the funding benefits.

Education Law > Administration & Operation > School Districts > Financial Liabilities
Education Law > Funding > Allocation
Governments > State & Territorial Governments > Finance
[HN35]Although it is completely understandable that a participant in a funded program may be disappointed when additional requirements (with their attendant costs) are imposed as a condition of continued participation in the program, just as such a participant will be disappointed if the total amount of the annual funds provided for the program is reduced by legislative or gubernatorial action, the circumstance that the legislature has determined that the requirements of an ongoing elective program should be modified does not render a local entity's decision whether to continue its participation in the modified program any less voluntary. Cal. Const. art. XIII B, § 6, provides no right of reimbursement when the state reduces revenue granted to local government. The appellate court rejects the suggestion that the state cannot legally provide school districts with funds for voluntary programs, and then effectively reduce that funding grant by requiring school districts to incur expenses in order to meet conditions of program participation.

Education Law > Administration & Operation > School Districts > Financial Liabilities
Education Law > Funding > Allocation
Governments > Local Governments > Finance
[HN36]A claimant that elects to discontinue participation in a state optional funded program does not face certain and severe penalties such as double taxation or other "draconian" consequences, but simply must adjust to the withdrawal of grant money along with the lifting of program obligations. Such circumstances do not constitute a reimbursable state mandate for purposes of Cal. Const. art. XIII B, § 6.

SUMMARY:

CALIFORNIA OFFICIAL REPORTS SUMMARY

The Department of Finance brought an administrative mandate proceeding against the Commission on State Mandates, challenging its decision that two statutes--requiring school site councils and advisory committees for certain educational programs to provide notice of meetings and to post agendas for those meetings--constituted a reimbursable state mandate under Cal. Const., art. XIII B, § 6. The trial court denied the petition. (Superior Court of Sacramento County, No. 00CS00866, Ronald B. Robie, Judge.) The Court of Appeal, Third Dist., No. C037645, rejected the department's position, concluding that a state mandate is established when the local governmental entity has no reasonable alternative and no true choice but to participate in the program, and incurs the additional costs associated with an increased or higher level of service.

The Supreme Court reversed the judgment of the Court of Appeal. The court held that the statute do not constitute a reimbursement state mandate. Thus, the claimants (two public school districts and a county) were not entitled to reimbursement. The claimants could not show that they were legally compelled to incur notice and agenda costs, and hence entitled to reimbursement from the state, based merely upon the circumstance that the notice and agenda provisions were mandatory elements of education-related programs in which the claimants participated, without regard to whether the claimants' participation was voluntary or compelled. If a school district elects to participate in any underlying voluntary education-related funded program, the obligation to comply with the notice and agenda requirements related to that program does not constitute a reimbursement state mandate. In this case, the claimants were not legally compelled to participate in eight of the nine underlying funded programs. Even if the claimants were legally compelled to participate in one of the nine programs, they were nevertheless not entitled to reimbursement from the state for such expenses, since they were free at all relevant times to use funds provided by the state for that program to pay required program expenses, including notice and agenda costs. The court further held that the claimants failed to show that they were

compelled to participate in the underlying programs. Moreover, the costs associated with the notice and agenda requirements were modest, and nothing in the governing statutes or regulations suggested that a school district was precluded from using a portion of the program funds obtained from the state to pay associated notice and agenda costs. (Opinion by George, C.J., expressing the unanimous view of the court.)

HEADNOTES

CALIFORNIA OFFICIAL REPORTS HEADNOTES

Classified to California Digest of Official Reports

(1) State of California § 11--Fiscal Matters--Reimbursable State Mandate--School Programs--Statutory Requirements to Provide Notice and to Post Agenda of Meetings--Participation in Programs as Legally Compelled. --In proceedings to determine whether statute, requiring school site councils and advisory committees for certain educational programs to provide notice of meetings and to post agendas for those meetings, were reimbursable mandates under Cal. Const., art. XIII B, § 6, the Court of Appeals erred in concluding that the claimants (two public school districts and a county) were entitled to reimbursement. The claimants could not show that they were legally compelled to incur notice and agenda costs, and hence entitled to reimbursement from the state, based merely upon the circumstance that the notice and agenda provisions were mandatory elements of education-related programs in which the claimants participated, without regard to whether the claimants' participation was voluntary or compelled. If a school district elects to participate in any underlying voluntary education-related funded program, the obligation to comply with the notice and agenda requirements related to that program does not constitute a reimbursement state mandate. The proper focus under a legal compulsion inquiry is upon the nature of the claimants' participation in the underlying programs themselves. In this case, the claimants were not legally compelled to participate in eight of the nine underlying funded programs. Even if the claimants were legally compelled to participate in one of the nine programs, they were nevertheless not entitled to reimbursement from the state for such expenses, since they were free at all relevant times to use funds provided by the state for that program to pay required program expenses, including notice and agenda costs.

[See 9 Witkin, Summary of Cal. Law (9th ed. 1989) Taxation, § 123A.]

(2a) (2b) (2c) State of California § 11--Fiscal Matters--Reimbursement State Mandate--School Programs--Statutory Requirements to Provide Notice and to Post Agenda of Meetings--Participation in Programs as Compelled--As Practical Matter. --In proceedings to determine whether statutes, requiring school site councils and advisory committees for certain educational programs to provide notice of meetings and to post agendas for those meetings, were reimbursable mandates under Cal. Const., art. XIII B, § 6, in which claimants (two public school districts and a county) failed to show that they were legally compelled to participate in the underlying funded programs and incur notice and agenda costs, the claimants also failed to show that, as a practical matter, they were compelled to participate in the underlying programs. Although the claimants sought to show that they had no true choice other than to participate in the programs, and that the absence of a reasonable alternative to participation was a de facto mandate, they did not face penalties such as double taxation or other severe consequences for not participating, and hence they were not mandated under Cal. Const., art. XIII, § 6, to incur increased costs. Moreover, the costs associated with the notice and agenda requirements were modest, and nothing in the governing statutes or regulations suggested that a school district from the state to pay associated notice and agenda costs. The asserted compulsion stemmed only from the circumstance that the claimants found the benefits of various funded programs too beneficial to refuse. However, the state is not prohibited from providing school districts with funds for voluntary programs, and then effectively reducing that grant by requiring the districts to incur expenses in order to meet conditions of program participation.

(3) Municipalities § 23--Powers--Relationship Between State and Local Governments. --Unlike the federal-state relationship, sovereignty is not an issue between state and local governments.

(4) State of California § 11--Fiscal Matters--Reimbursable State Mandate--Purpose. --The purpose of Cal. Const., art. XIII B, § 6 (reimbursable state mandates), is to preclude the state from shifting financial responsibility for carrying out governmental functions to local agencies, which are ill equipped to assume increased financial responsibilities.

COUNSEL: Bill Lockyer, Attorney General, Andrea Lynn Hoch, Chief Assistant Attorney General, Manuel M. Medeiros and Louis R. Mauro, Assistant Attorneys General, Catherine M. Van Aken and Leslie R. Lopez, Deputy Attorneys General, for Plaintiff and Appellant.

Paul M. Starkey, Camille Shelton and Eric D. Feller for Defendant and Respondent.

Jo Anne Sawyerknoll, Jose A. Gonzales and Arthur M. Palkowitz for Real Party in Interest and Respondent San Diego Unified School District.

No appearance by Real Parties in Interest and Respondents Kern High School District and County of Santa Clara.

Ruth Sorensen for California State Association of Counties, City of Buenaventura, City of Carlsbad, City of Dixon, City of Indian Wells, City of La Habra Heights, City of Merced, City of Monterey, City of Plymouth, City and County of San Francisco, City of San Luis Obispo, City of San Pablo, City of Tracy and City of Walnut Creek as Amici Curiae on behalf of Real Parties in Interest and Respondents.

Diana McDonough, Harold M. Freiman, Cynthia A. Schwerin and Lozano Smith for California School Boards Association, through its Education Legal Alliance as Amici Curiae on behalf of Real Parties in Interest and Respondents.

JUDGES: (Opinion by George, C. J., expressing the unanimous view of the court.)

OPINION BY: GEORGE

OPINION

[*730] [**1205] [***240] Article XIII B, section 6, of the California Constitution

provides: "Whenever the Legislature or any state agency mandates a new program or higher level of service on any local government, the State shall provide a subvention of funds to reimburse such local government for the costs of such program or increased level of service . . . ." (Hereafter article XIII B, § 6.)

Real parties in interest--two public school districts and a county (hereafter claimants)--participate in various education-related programs that are funded by the state and, in some instances, by the federal government. Each of these underlying funded programs in turn requires participating public school districts to establish and utilize specified school councils and advisory committees. Statutory provisions enacted in the mid-1990's require that such school councils and advisory committees provide notice of meetings, and post agendas for those meetings. (See Gov. Code, § 54952; Ed. Code, § 35147.) [*731] We granted review to determine whether claimants have a right to reimbursement from the state for their costs in complying with these statutory notice and agenda requirements.

We conclude, contrary to the Court of Appeal, that claimants are not entitled to reimbursement under the circumstances presented here. Our conclusion is based on the following determinations:

First, we reject claimants' assertion that they have been legally compelled to incur notice and agenda costs, and hence are entitled to reimbursement from the state, based merely upon the circumstance that the notice and agenda provisions are mandatory elements of education-related programs in which claimants have participated, without regard to whether a claimant's participation in the underlying program is voluntary or compelled. Second, we conclude that as to *eight* of the nine underlying funded programs here at issue, claimants have not been legally compelled to participate in those programs, and hence cannot establish a reimbursable state mandate as to those programs based upon a theory of legal compulsion. Third, assuming (without deciding) that claimants have been legally compelled to participate in *one* of the nine programs, we conclude that claimants nonetheless have no entitlement to reimbursement from the state for such expenses, because they have been free at all relevant times to use funds provided by the state for that program to pay required program expenses--including the notice and agenda costs here at issue.

Finally, we reject claimants' alternative contention that even if they have not been *legally* compelled to participate in the underlying funded programs, as a *practical* matter they have been compelled to do so and hence to incur noticeand agenda-related costs. Although we do not foreclose the possibility that a reimbursable state mandate might be found in circumstances short of legal compulsion--for example, if the state were to impose a substantial penalty (independent of the program funds at issue) upon any local entity that declined to participate in a given program--claimants here faced no such practical compulsion. Instead, although claimants argue that they have had "no true option or choice" other than to participate in the underlying funded educational programs, the asserted compulsion in this case stems only from the circumstance that claimants have found the benefits of various funded programs "too good to refuse"--even though, as a condition of program participation, they have been forced to incur some costs. On the facts presented, the [***241] cost of compliance with conditions of participation in these funded programs does not amount to a reimbursable state mandate.

Accordingly, we shall reverse the judgment of the Court of Appeal.

I.

[HN1] [**1206] [*732] A number of statutes establish various school-related educational programs, such as the School-Based Pupil Motivation and Maintenance Program and Dropout Recovery Act (Ed. Code, § 54720 et seq.), Programs to Encourage Parental Involvement (Ed. Code, § 11500 et seq.), and the federal Indian Education Program (20 U.S.C. § 7421 et seq. [former 25 U.S.C. § 2604 et seq.]). Under these statutes, participating school districts are granted state or federal funds to operate the program, and are required to establish school site councils or advisory committees that help administer the program. Program funding often is substantial--for example, on a statewide basis, funding provided by the state for school improvement programs (see Ed. Code, § 52010 et seq.,§§ 62000, 62000.2, subd. (b), 62002) for the 1998-1999 fiscal year totaled approximately $ 394 million. (Cal. Dept. of Ed., Rep., Budget Act of 1998 (Nov. 1998) p. 52.)

In the mid-1990's, the Legislature passed legislation designed to make the operations of the councils and advisory committees related to such programs more open and accessible to the public. First, effective April 1, 1994, the Legislature enacted Government Code section 54952, which expanded the reach of the Ralph M. Brown Act (Brown Act) (Gov. Code, § 54950.5 et seq.)--California's general open meeting law--to apply to all such official local advisory bodies. [1] Second, effective July 21, 1994, Education Code section 35147 superceded Government Code section 54952, with respect to the application of the Brown Act to designated councils and advisory committees. Although the earlier (Government Code) statute had made *all* local government councils and advisory committees subject to *all* provisions of the Brown Act, [HN2]the later (Education Code) statute generally exempts councils and advisory committees of nine specific programs from compliance with all provisions of the Brown Act, and imposes instead its own separately described requirement that all such councils and advisory committees related to those nine programs be open to the public, provide notice of meetings, and post meeting agendas. [2]

1 Government Code section 54952, a provision of the Brown Act, provides in relevant part: [HN3]"As used in this chapter, 'legislative body' means: [P] (a) The governing body of a local agency or any other local body created by state or federal statute. [P] (b) A commission, committee, board, or other body of a local agency, whether permanent or temporary, decisionmaking or advisory, created by charter, ordinance, resolution, or formal action of a legislative body. . . ."

2 Education Code section 35147 provides in relevant part: [HN4]"(a) Except as specified in this section, any meeting of the councils or committees specified in subdivision (b) is exempt from . . . the Ralph M. Brown Act. . . . [P] (b) The councils and schoolsite advisory committees established pursuant to Sections 52012, 52065, 52176, and 52852, subdivision (b) of Section 54425, Sections 54444.2, 54724, and 62002.5, and committees formed pursuant to Section 11503 or Section 2604 of Title 25 of the United States Code, are subject to this section. [P] (c) Any meeting held by a council or committee specified in subdivision (b) shall be open to the public and any member of the public shall be able to address the council or committee during the meeting on any item within the subject matter jurisdiction of the council or committee. Notice of the meeting shall be posted at the schoolsite, or other appropriate place accessible to the public, at least 72 hours before the time set for the meeting. The notice shall specify the date, time, and location of the meeting and contain an agenda describing each item of business to be discussed or acted upon. The council or committee may not take any action on any item of business unless that item appeared on the posted agenda or unless the council or committee members present, by unanimous vote, find that there is a need to take immediate action and that the need for action came to the attention of the council or committee subsequent to the posting of the agenda. . . ."

The nine school site councils and advisory committees specified in subdivision (b), above, were established as part of the following programs: The school improvement program (Ed. Code, § 52010 et seq.; see *id.*, §§ 62000, 62000.2, subd. (b), 62002) [a general program that disburses funds for all aspects of school operation and performance]; the American Indian Early Childhood Education Program (Ed. Code, § 52060 et seq.); the Chacon-Moscone Bilingual-Bicultural Education Act of 1976 (Ed. Code, § 52160 et seq.; see *id.*, 62000, 62000.2, subd. (d)); the School-Based Program Coordination Act (Ed. Code, § 52850 et seq. [a program designed to coordinate various categorical aid programs]); the McAteer Act (Ed. Code, § 54400 et seq. [various compensatory education programs for "disadvantaged minors"]); the Migrant Children Education Programs (Ed. Code, § 54440 et seq.); the School-Based Pupil Motivation and Maintenance Program and Dropout Recovery Act (Ed. Code, § 54720 et seq. [a program designed to address truancy and dropout issues]); the Programs to Encourage Parental Involvement (Ed. Code, § 11500 et seq.); and the federal Indian

Education Program (20 U.S.C. § 7421 et seq. [former 25 U.S.C. § 2601 et seq.].)

[**1207] [***242] [*733] Compliance with these notice and agenda rules in turn imposed various costs on the affected councils and committees. Claimants Kern High School District, San Diego Unified School District, and County of Santa Clara filed "test claims" (see Gov. Code, § 17521) with the Commission on State Mandates (Commission), seeking reimbursement for the costs incurred by school councils and advisory committees in complying with the new statutory notice and agenda requirements. (See generally *Kinlaw v. State of California* (1991) 54 Cal.3d 326, 331-333 [285 Cal. Rptr. 66, 814 P.2d 1308] [describing legislative procedures implementing California Constitution article XIII B, section 6].) [3] In a statement of decision issued in mid-April 2002, the Commission found in favor of claimants. It concluded that [HN5]the statutory notice and agenda requirements impose reimbursable state mandates for the costs of preparing meeting agendas, posting agendas, and providing the public an opportunity to address the respective council or committee.

3 In December 1994, Santa Clara County filed the first test claim, asserting that Government Code section 54952 imposed a reimbursable state mandate. In December 1995, Kern High School District filed a test claim asserting that Education Code section 35147 imposes a reimbursable state mandate. These two claims were consolidated, and San Diego Unified School District was added as a coclaimant.

[*734] Acting through the Department of Finance, the State of California (hereafter Department of Finance or Department) thereafter brought this administrative mandate proceeding under Government Code section 17559, subdivision (b), to challenge the Commission's decision. The San Diego Unified School District took the lead role on behalf of claimants; the Kern High School District and the County of Santa Clara did not appear in the court proceedings below and have not appeared in this court.

In November 2000, the trial court, agreeing with the Commission, denied the mandate petition. [4] The Department of Finance [***243] appealed, arguing that the school councils and advisory committees at issue serve categorical aid programs in which school districts participate "voluntarily," often as a condition of receiving state or federal program funds. The Department of Finance asserted that the state has not *compelled* school districts to participate in or accept funding for any of those underlying programs--and hence has not required the establishment of any of the councils and committees that serve the programs. Instead, the Department of Finance argued, the state merely has set out reasonable conditions and rules that must be adhered to if a local entity elects to participate in a program and receive program funding. Accordingly, the Department of Finance asserted, because local entities are not required to undertake or continue to participate in the programs, the state, by enacting Government Code section 54952 and Education Code section 35147, has not imposed a "mandate," as that term is used in article XIII B, section 6. It follows, the Department of Finance asserted, that claimants have no right to reimbursement under article XIII B, section 6.

4 The trial court stated: "Two primary issues are raised in this matter. The first issue is whether the 1993 amendments to the Brown Act [that is, enactment of Government Code section 54952] and the 1994 enactment of . . . [Education Code] section 35147 mandate a new program or higher level of service. The Court concludes that they do. The second issue is whether a reimbursable state mandate is created only when an advisory council or committee which is subject to the Brown Act is required by state law. The Court concludes that it is not."

In a July 2002 decision, the Court of Appeal rejected the position taken by the Department of Finance. The appellate court concluded that a state mandate is established under article XIII B, section 6, when the local governmental entity has "no reasonable alternative" and "no true choice but to participate" in the program, and incurs the additional costs associated with an increased or higher level of service. [5]

5 The Court of Appeal also concluded that Government Code section 54952 and Education Code section 35147 establish a "higher level of service" under article XIII B, section 6. We need not and do not review that determination here, and express no view on the validity of that conclusion.

[**1208] We granted review to consider the Court of Appeal's construction of the term "state mandate" as it appears in article XIII B, section 6.

[*735] II.

Article XIII A (adopted by the voters in 1978 as Proposition 13), [HN6]limits the *taxing* authority of state and local government. Article XIII B (adopted by the voters in 1979 as Proposition 4) limits the *spending* authority of state and local government.

Article XIII B, section 6, provides as follows: [HN7]"Whenever the Legislature or any state agency mandates a new program or higher level of service on

any local government, the State shall provide a subvention of funds to reimburse such local government for the costs of such program or increased level of service, except that the Legislature may, but need not, provide such subvention of funds for the following mandates: [P] (a) Legislative mandates requested by the local agency affected; [P] (b) Legislation defining a new crime or changing an existing definition of a crime; or [P] (c) Legislative mandates enacted prior to January 1, 1975, or executive orders or regulations initially implementing legislation enacted prior to January 1, 1975." Article XIII B became operative on July 1, 1980. (*Id.*, § 10.)

We have observed that article XIII B, section 6 [HN8]"recognizes that articles XIII A and XIII B severely restrict the taxing and spending powers of local governments. [Citation.] Its purpose is to preclude the state from shifting financial responsibility for carrying out governmental functions to local agencies, which are 'ill equipped' to assume increased financial responsibilities because of the taxing and spending limitations that articles XIII A and XIII B impose." [***244] (*County of San Diego v. State of California* (1997) 15 Cal.4th 68, 81 [61 Cal. Rptr. 2d 134, 931 P.2d 312] (*County of San Diego*).) We also have observed that a reimbursable state mandate does not arise merely because a local entity finds itself bearing an "additional cost" imposed by state law. (*County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 55-57 [233 Cal. Rptr. 38, 729 P.2d 202].) The additional expense incurred by a local agency or school district arising as an "incidental impact of a law which applied generally to all . . . entities" is not the "type of expense . . . [that] the voters had in mind when they adopted section 6 of article XIII B." (*Lucia Mar Unified School Dist. v. Honig* (1999) 44 Cal. 3d 830, 835 [244 Cal. Rptr.677, 750 P.3d 318]; see also *County of Fresno v. State of California* (1991) 53 Cal.3d 482, 487 [280 Cal. Rptr. 92, 808 P.2d 235]; *City of Sacramento v. State of California* (1990) 50 Cal.3d 51, 70 [266 Cal. Rptr. 139, 785 P.2d 522] (*City of Sacramento*). [6])

> 6 As we observed in *City of Sacramento, supra*, 50 Cal.3d at page 70, [HN9]"extension of the subvention requirements to costs 'incidentally' imposed on local governments would require the Legislature to assess the fiscal effect on local agencies of each law of general application. Moreover, it would subject much general legislation to the supermajority vote required to pass a companion local-government revenue bill. Each such necessary appropriation would, in turn, cut into the *state's* article XIII B spending limit. ([Art. XIII B,] § 8, subd. (a).)" We reaffirmed that "nothing in the language, history, or apparent purpose of article XIII B suggested such far-reaching limitations on legitimate state power." (50 Cal.3d at p. 70.)

The focus in many of the prior cases that have addressed article XIII B, section 6, has been upon the meaning of the terms "new program" or [*736] "increased level of service." In the present case, we are concerned with the meaning of state "mandate."

III.

A.(1)

In its briefs, the Department of Finance asserts that article XIII B, section 6, reflects an intent on the part of the drafters and the electorate to limit reimbursement to costs that are forced upon local governments as a matter of legal compulsion. The Commission's briefs take a similar approach, arguing that reimbursement under the constitutional provision requires a showing that a local entity was "ordered or commanded" to incur added costs. At oral argument, both the Department and the Commission retreated somewhat from these positions, and suggested [**1209] that legal compulsion may not be a necessary condition of a finding of a reimbursable state mandate in all circumstances. For the reasons explained below, although we shall analyze the legal compulsion issue, we find it unnecessary in this case to decide whether a finding of legal compulsion is *necessary* in order to establish a right to reimbursement under article XIII B, section 6, because we conclude that even if there are some circumstances in which a state mandate may be found in the absence of legal compulsion, the circumstances presented in this case do not constitute such a mandate.

1.

The Department of Finance and the Commission maintain that the drafters of article XIII B, section 6, borrowed that provision's basic idea and structure--and the gist of its "state mandate" language--from then existing statutes. (See generally *Hayes v. Commission on State Mandates* (1992) 11 Cal.App.4th 1564, 1577-1581 [15 Cal. Rptr. 2d 547].) At the time of [***245] the drafting and enactment of article XIII B, section 6, former Revenue and Taxation Code section 2231, subdivision (a) (currently Gov. Code, § 17561, subd. (a)) provided: [HN10]"The state shall reimburse each local agency for all 'costs mandated by the state,' as defined in Section 2207 . . . ." And at that same time, former Revenue and Taxation Code section 2207 (currently Gov. Code, § 17514) provided: " [HN11]'Costs mandated by the state' means any increased costs which a local agency is required to incur as a result of the [*737] following: [P] (a) Any law enacted after January 1, 1973, which mandates a new program or an increased level of service of an existing program . . . ."

As the Department of Finance observes, we frequently have looked to ballot materials in order to inform our understanding of the terms of a measure enacted by the electorate. (See, e.g., *County of Fresno v. State of California, supra,* 53 Cal.3d 482, 487 [reviewing ballot materials concerning art. XIII B].) The Department stresses that the ballot materials pertaining to article XIII B in two places suggested that a state mandate comprises something that a local government entity is required or forced to do. The Legislative Analyst stated: " 'State mandates' are *requirements imposed* on local governments by legislation or executive orders." (Ballot Pamp., Special Statewide Elec. (Nov. 6, 1979) Prop. 4, p. 16, italics added.) Similarly, the measure's proponents stated that the provision would "not allow the state governments to *force* programs on local governments without the state paying for them." (*Id.*, arguments in favor of Prop. 4, p. 18, capitalization removed, italics added.) The Department concludes that the ballot materials fail to suggest that a reimbursable state mandate might be found to exist outside the context of legal compulsion.

The Department of Finance and the Commission also assert that subsequent judicial construction of former Revenue and Taxation Code sections 2231 and 2207 -upon which, as just discussed, article XIII B, section 6, apparently was based--suggests that a narrow meaning was accorded the term "state mandate" at the time article XIII B, section 6, was enacted. The Department relies primarily upon *City of Merced v. State of California* (1984) 153 Cal. App. 3d 777 [200 Cal. Rptr. 642] (*City of Merced*). Claimants and amici curiae on their behalf assert that *City of Merced* either is distinguishable or was wrongly decided. We proceed to describe *City of Merced* at some length.

In *City of Merced, supra,* 153 Cal. App. 3d 777, the city wished either to purchase or to condemn (under its eminent domain authority) certain privately owned real property. If the city were to elect to proceed by eminent domain, it would be required by a then recent enactment (Code of Civ. Proc., § 1263.510) to compensate the property owner for loss of its "business goodwill." The city did elect to proceed by eminent domain, and in April 1980 the Merced Superior Court issued a final order in condemnation, directing the city to pay the property owner for the latter's loss of business goodwill. The city did so and then sought reimbursement from the state, arguing that the new statututory requirement that it compensate for business goodwill amounted to a reimbursable state mandate. (*City of Merced,* at p. 780.)

[**1210] [*738] The constitutional reimbursement provision contained in article XIII B, section 6, did not become operative until July 1, 1980. Accordingly, the City of Merced sought reimbursement under the then existing statutory authority--Revenue and Taxation Code former sections 2231 and 2207 -which, as noted, apparently had [***246] served as the model for the constitutional provision.

The State Board of Control--which at the time exercised the authority now exercised by the Commission--agreed with the City of Merced and found a reimbursable state mandate. (*City of Merced, supra,* 153 Cal. App. 3d 777, 780.) The city's approved claim for reimbursement "was included, along with other similar claims, as a [budget] line item in chapter 1090, Statutes of 1981." (*Ibid.*) The Legislature, however, refused to authorize the reimbursement, and directed the board not to accept, or submit, any future claim for reimbursement for business goodwill costs. (*Ibid.*)

The City of Merced then sought a writ of mandate commanding the Legislature to provide reimbursement. The trial court denied that request, and the Court of Appeal affirmed. The court concluded that, as a matter of law, the city's increased costs flowing from its election to condemn the property did not constitute a reimbursable state mandate. (*City of Merced, supra,* 153 Cal. App. 3d 777, 781-783.) The court reasoned: "[W]hether a city or county decides to exercise eminent domain is, essentially, an option of the city or county, rather than a mandate of the state. The fundamental concept is that the city or county is not required to exercise eminent domain. If, however, the power of eminent domain is exercised, then the city will be required to pay for loss of goodwill. Thus, payment for loss of goodwill is not a state-mandated cost." (*Id.*, at p. 783.)

The court in *City of Merced, supra,* 153 Cal. App. 3d 777, found its construction of former Revenue and Taxation Code sections 2231 and 2207 as those statutory provisions read at the time they served as the model for article XIII B, section 6 to be confirmed by the subsequent legislative action amending former Revenue and Taxation Code section 2207 (and related section 2207.5). As the court explained: ". . . Senate Bill No. 90 (Russell), 1979-1980 Regular Session . . . added Revenue and Taxation Code section 2207, subdivision (h): [P] ' [HN12]"Costs mandated by the state" means any increased costs which a local agency is required to incur as the result of the following: [P] . . . [P] (h) Any statute enacted after January 1, 1973, or executive order issued after January 1, 1973, which *adds new requirements to an existing optional program or service* and thereby increases the cost of such program or service *if the local agencies have no reasonable alternatives other than to continue the optional program.*' " (*City of Merced, supra,* 153 Cal. App. 3d 777, 783-784, italics added.)

[*739] (Of relevance here, Senate Bill No. 90 (1979-1980 Reg. Sess.) also added a substantively identical provision to former Revenue and Taxation Code

section 2207.5 -a specialized section that addressed reimbursable state mandates as they related to a school district.) [7]

> 7 Revised section 2207.5 provided that " [HN13]'[c]osts mandated by the state' means any increased costs which a school district is required to incur as a result of . . . [P] . . . [P] (h) Any statute enacted after January 1, 1973, or executive order issued after January 1, 1978, which adds new requirements to an existing optional program or service and thereby increases the cost of such program or service *if the school districts have no reasonable alternatives other than to continue the optional program.*" (Stats. 1980, ch. 1256, § 5, pp. 4248-4249, eff. July 1, 1981, italics added.)

The court in *City of Merced* continued: "Senate Bill No. 90 became effective on July 1, 1981, [more than a year] after plaintiff incurred the cost of business goodwill for which it seeks reimbursement. Subdivision (h) appears to have been included [***247] in the bill to provide for reimbursement of increased costs in an optional program such as eminent domain when the local agency has no reasonable alternative to eminent domain. The legislative history of Senate Bill No. 90 supports the conclusion that subdivision (h) was added to Revenue and Taxation Code section 2207*to extend state liability rather than to clarify* [**1211] *existing law.*" (*City of Merced, supra,* 153 Cal. App. 3d 777, 784, italics added.)

After examining two legislative committee reports, [8] the court in *City of Merced, supra,* 153 Cal. App. 3d 777, asserted that they "characterize Senate Bill No. 90 as expanding the definition of local reimbursable costs. The Legislative Analyst's Report . . . on Senate Bill No. 90 similarly includes a statement that the bill expands the definition of state-mandated costs. Such characterizations of the purpose of Senate Bill No. 90 are consistent only with the conclusion that, *until that bill was enacted, increased costs incurred in an optional program such as eminent domain were not state mandated.* Thus the cost of business goodwill for which plaintiff was required [by Code of Civil Procedure, section 1263.510] to pay in April 1980, was not a state-mandated cost. It follows that the trial court properly denied the [*740] petition for a writ of mandamus to compel payment of that cost." (*City of Merced, supra,* 153 Cal. App. 3d 777, 785, italics added.)

> 8 The court in *City of Merced* asserted: "The Report of the Assembly Revenue and Taxation Committee . . . includes a statement: '*SB 90* further defines "mandated costs" in Sections 4 and 5 to include the following: [P] . . . [P] e. Where a statute or executive order adds *new requirements to an existing optional program*, which increases costs if the local agency has no reasonable alternative than to continue that optional program.' (Rep., p. 1, italics in original.) [P] Additionally, the Ways and Means Committee's Staff Analysis . . . notes that Senate Bill No. 90: 'Expands the definition of *local* reimbursable costs mandated and paid by the state to include: [P] . . . [P] e. Statutes or executive orders adding *new requirements to an existing optional program*, which increases costs if the local agency has no reasonable alternative than to continue that optional program.' (P. 2, italics in original.)" (*City of Merced, supra,* 153 Cal. App. 3d at p. 784.)

In other words, the court in *City of Merced* concluded that [HN14]former Revenue and Taxation Code sections 2231 and 2207, as they read at the time they served as the model for article XIII B, section 6, contemplated a narrow definition of reimbursable state mandate, and not the subsequently expanded definition of reimbursable state mandate found in the 1981 amendments to the Revenue and Taxation Code. [9]

> 9 We need not, and do not, decide whether the court in *City of Merced, supra,* 153 Cal. App. 3d 777, correctly characterized the statutory history of the 1981 amendments to the Revenue and Taxation Code.

A few months after the Court of Appeal filed its opinion in *City of Merced, supra,* 153 Cal. App. 3d 777, the Legislature overhauled the law pertaining to state mandates and reimbursements by amending both the Revenue and Taxation Code and the Government Code. (Stats. 1984, ch. 1459, p. 5113.) The Department of Finance and the Commission assert that two aspects of the legislative overhaul are particularly relevant to the issue we address here.

First, the Department of Finance and the Commission assert that the Legislature enacted a new section of the Government Code--section 17514 -in order to implement the reimbursable-state-mandate directive of article XIII B, section 6. [10] The [***248] Department and the Commission assert that in enacting that provision, the Legislature readopted the original, *narrow* definition of reimbursable state mandate found in the initial versions of former Revenue and Taxation Code section 2207 -which, the Department and the Commission maintain, existed at the time article XIII B, section 6 was drafted and adopted, and which defined "costs mandated by the state" as those "which a local agency is *required* to incur." (See Stats. 1975, ch. 486, § 1.8, p. 997 [Rev. & Tax. Code, § 2207]; Stats. 1977, ch. 1135, § 5, p. 3646 [Rev. & Tax. Code, § 2207]; Stats. 1984, ch. 1459, § 1,

p. 5114 [Gov. Code, § 17514], italics added.) This same statutory language also had been recently construed at that time in *City of Merced, supra*, 153 Cal. App. 3d 777, as recognizing [**1212] as a reimbursable state mandate only that imposed when the local entity is legally compelled to engage in the underlying practice or program.

> 10 Government Code section 17514 reads: [HN15]" 'Costs mandated by the state' means any increased costs which a local agency or school district is *required* to incur after July 1, 1980, as a result of any statute enacted on or after January 1, 1975, or any executive order implementing any statute enacted on or after January 1, 1975, which mandates a new program or higher level of service of an existing program within the meaning of Section 6 of Article XIII B of the California Constitution." (Italics added.)

[*741] Second, the Department of Finance and the Commission observe, in enacting Government Code section 17514, the Legislature also provided that the use of the broader definition contained in the *amended* versions of Revenue and Taxation Code former sections 2207 and 2207.5 (which became effective July 1, 1981) should be phased out, but that the definition could be used to determine claims that arose prior to 1985. (See Stats. 1984, ch. 1459, § 1, p. 5123; 68 Ops.Cal.Atty.Gen. 224 (1985).)

In other words, the Department of Finance and the Commission assert, [HN16]in the Legislature's 1984 overhaul of the statutory scheme implementing article XIII B, section 6, the Legislature embraced and codified the narrow definition of reimbursable state mandate set out in former Revenue and Taxation Code section 2207 (and construed in *City of Merced*) as the appropriate test in implementing the constitutional provision. Moreover, the Department and the Commission maintain, the Legislature limited the continued use of the broader definition of a statutorily imposed reimbursable state mandate (set out in the amendments to former Revenue and Taxation Code, sections 2207 and 2207.5, effective in mid-1981) to a small and ever-decreasing number of cases. Five years later, the Legislature repealed former Revenue and Taxation Code sections 2207 and 2207.5 (see Stats. 1989, ch. 589, §§ 7 & 8, p. 1978)--thereby finally discarding the broad definition of statutorily imposed reimbursable state mandate found in subdivision (h) of each of those statutes.

As noted above, the Department of Finance and the Commission assert in their briefs that [HN17]based upon the language of article XIII B, section 6, and the statutory and case law history described above, the drafters and the electorate must have intended that a reimbursable state mandate arises only if a local entity is "required" or "commanded" --that is, legally compelled--to participate in a program (or to provide a service) that, in turn, leads unavoidably to increasing the costs incurred by the entity. (*City of Merced, supra*, 153 Cal. App. 3d 777, 783; see also *Long Beach Unified School District v. State of California* (1990) 225 Cal. App. 3d 155, 174 [275 Cal. Rptr. 449] [construing the term "mandates," for purposes of art. XIII B, § 6, "in the ordinary sense of 'orders' or 'commands' "]; [***249] *County of Sonoma v. Commission on State Mandates* (2000) 84 Cal.App.4th 1264, 1284 [101 Cal. Rptr. 2d 784] (*County of Sonoma*) [Legislature's interpretation of art. XIII B, § 6, in Gov. Code, 17514, as limited to "costs which a . . . school district is *required to incur*" is entitled to great weight].) [11]

> 11 Although, as described immediately below (in pt. III.A.2.), the Commission attempts to defend on other grounds its determination below in favor of claimants, the Commission strongly disputes the Court of Appeal's broad interpretation of state mandate as encompassing circumstances in which a local entity is not "ordered or commanded" to perform a task that in turn requires it to incur additional costs. [*742]

2.

Claimants and amici curiae on their behalf assert that even if "legal compulsion" is the governing standard, they meet that test because, they argue, claimants have been legally compelled to incur compliance costs under Government Code section 54952 and Education Code section 35147, subdivision (c). The Commission--but not the Department--supports claimants' proposed application of the legal compulsion test.

In so arguing, claimants focus upon the circumstance that a school district *that participates* in one of the underlying programs listed in Education Code section 35147, subdivision (b), must comply with program requirements, including the statutory notice and agenda obligations, set out in Government Code section 54952 and Education Code section 35147, subdivision (c). Claimants assert: "[O]nce [a district] participates in one of the educational programs at issue, it does not thereafter have the option of performing that activity in a manner that avoids incurring costs mandated by amended Government Code section 54952 and Education Code section 35147."

[**1213] The Department of Finance, relying upon *City of Merced, supra*, 153 Cal. App. 3d 777, asserts that claimants err by focusing upon a school district's legal obligation to comply with program conditions, rather than focusing upon whether the school district has a legal obligation to participate in the underlying

program to which the conditions attach. As suggested above, the core point articulated by the court in *City of Merced* is that [HN18]activities undertaken at the option or discretion of a local government entity (that is, actions undertaken without any legal compulsion or threat of penalty for nonparticipation) do not trigger a state mandate and hence do not require reimbursement of funds--even if the local entity is obliged to incur costs as a result of its discretionary decision to participate in a particular program or practice. (*Id.*, at p. 783.) Claimants concede that *City of Merced* conflicts with their contrary view, but they assert that the opinion is distinguishable and ask us to decline to follow, or extend, that decision.

Claimants stress--as we acknowledged above--that *City of Merced, supra*, 153 Cal. App. 3d 777, was decided in the context of an eminent domain proceeding, and that the appellate court was engaged in construing the *statutory* reimbursement scheme rather than article XIII B, section 6. Claimants also assert that although the City of Merced had discretion whether or [*743] not to exercise its power of eminent domain, and was under no compulsion to do so, in the present case "school site council and advisory committee meetings cannot be held in a manner that avoids application of [the requirements of] Government Code section 54952 and Education Code section 35147."

The points relied upon by claimants neither call into doubt nor persuasively distinguish [***250] *City of Merced, supra*, 153 Cal. App. 3d 777 [200 Cal. Rptr. 642]. The truer analogy between that case and the present case is this: In *City of Merced*, the city was under no legal compulsion to resort to eminent domain--but when it elected to employ that means of acquiring property, its obligation to compensate for lost business goodwill was not a reimbursable state mandate, because the city was not required to employ eminent domain in the first place. Here as well, [HN19]if a school district elects to participate in or continue participation in any underlying *voluntary* education-related funded program, the district's obligation to comply with the notice and agenda requirements related to that program does not constitute a reimbursable state mandate. [12]

> 12 The Commission further attempts to distinguish *City of Merced, supra*, 153 Cal. App. 3d 777, by observing that the eminent domain statute at issue in that case made clear, in the *same* statute that imposed the requirement that an entity employing eminent domain also compensate for lost business goodwill, the discretionary nature of the decision whether to acquire property by purchase or instead by eminent domain. The Commission argues that no such express statement concerning local government discretion is set out in the statutes here at issue. As we explain *post*, part III.A.3.a., however, the underlying program statutes at issue in this case (with one possible exception--see *post*, pt. III.A.3.b.) make it clear that school districts retain the discretion not to participate in any given underlying program--and, as we explain *post*, footnote 22, the circumstance that the notice and agenda requirements of these elective programs were enacted *after* claimants first chose to participate in the programs does not make claimants' choice to continue to participate in those programs any less voluntary.

We therefore reject claimants' assertion that merely because they participate in one or more of the various education-related funded programs here at issue, the costs they incurred in complying with program conditions have been legally compelled and hence constitute reimbursable state mandates. We instead agree with the Department of Finance, and with *City of Merced, supra*, 153 Cal. App. 3d 777, that [HN20]the proper focus under a legal compulsion inquiry is upon the nature of claimants' participation in the underlying programs themselves.

3.

Turning to that question--and without deciding whether a finding of legal compulsion to participate in an underlying program is *necessary* in order to establish a right to reimbursement under article XIII B, section 6 -we [*744] conclude, upon review of the [**1214] applicable statutes, that claimants are, and have been, free from legal compulsion as to eight of the nine underlying funded programs here at issue. As to one of the funded programs, we shall assume, for purposes of analysis, that a district's participation in the program is in fact legally compelled.

a.

It appears to be conceded that, as to most of the nine education-related funded programs at issue, school districts are not legally compelled to participate in those programs. For example, [HN21]the American Indian Early Childhood Education Program (Ed. Code, § 52060 et seq.), which implements projects designed to develop and test educational models to increase reading and math competence of students in preschool and early grades, states that school districts "may apply" to be included in the project (*id.*, § 52063) and, if accepted to participate, will receive program funding (*id.*, § 52062). Education Code section 52065 in turn states that each school district that receives funds provided by section 52062 "shall establish a districtwide [***251] American Indian advisory committee for American Indian early childhood education." Plainly, a school district's initial and continued participation in the program is voluntary, and the

obligation to establish or maintain an advisory committee arises only if the district elects to participate in, or continue to participate in, the program. Although the language of most of the other implementing statutes varies, they generally follow this same approach, with the same result: [HN22]Participation in most of the programs listed in Education Code section 35147 is voluntary, and the obligation to establish or maintain a site council or advisory committee arises only if a district elects to participate in, or continue to participate in, the particular program.

Although *claimants* do not assert that they have been legally compelled to participate in *any* underlying program for which they have sought reimbursement for their compliance costs--and, indeed, their briefing suggests the opposite [13] --the Commission and amicus curiae Education Legal Alliance assert that the school improvement program (a "sunsetted," but still funded, program that disburses funds for all aspects of school operation and performance; Ed. Code, § 52012 et seq.,§§ 62000, 62000.2, subd. (b), 62002) legally compels school districts to establish site councils without regard to whether the district participates in the underlying funded program to which the site councils apply. The Commission and amici curiae rely upon Education Code section 52010, which states in relevant part: [HN23]"*With the exception of* [*745] *subdivisions (a) and (b) of Section 52011*, the provisions of this chapter shall apply only to school districts and schools which participate in school improvement programs authorized by this article." (Italics added.) Section 52011, subdivision (b), in turn provides that "EACH SCHOOL DISTRICT SHALL: [P] . . . [P] (b) *Adopt policies* to ensure that prior to scheduled phase-in, a school site council as described in Section 52012 is established at each school site to consider whether or not it wishes the local school to participate in the school improvement program." (Italics added.)

13 Claimants at one point characterize themselves as having "*decided* to participate in the programs listed in Education Code section 35147." (Italics in added.)

The Commission and amici curiae read these provisions as requiring all schools and school districts throughout the state to "establish a school site council even if the school [or district] does not participate in the school improvement program. " We disagree. [HN24]Reasonably construed, the statutes require only that a school district adopt "policies" (i.e., a *plan*) "to ensure" that *if* the district elects to participate in the School Improvement Program, a school site council *will*, "prior to phase-in" of the districtwide program, exist at each school, so that each individual school will be able to decide whether it wishes to participate in the district's program. In other words, the statutes require that districts adopt policies or plans for school site councils--but the statutes do not require that districts adopt councils themselves unless the district first elects to participate in the underlying program. [14]

14 Amicus curiae California School Boards Association suggests that provisions of two other programs--the School-Based Program Coordination Act (Ed. Code, § 52850 et seq.) and the School-Based Pupil Motivation and Maintenance Program and Dropout Recovery Act (Ed. Code, § 54720 et seq.)--require that site councils be established, whether or not the school district participates in the underlying program. In both instances, the statutes make it clear that [HN25]"prior to a school beginning to develop a [program] plan," the district first must establish a local school site council that in turn will "consider whether or not it wishes the local school to participate in the" program. Amicus curiae misreads the statutes; in both instances, the statutes make it clear that these requirements apply "only to school districts and schools *which participate in*" the respective programs (see Ed. Code, §§ 52850, 54722, italics added), and each statutory scheme provides that school site councils "shall be established at each school *which participates in*" the program. (*Id.*, §§ 52852, 54722, italics added.)

[**1215] [***252] We therefore conclude that, as to eight of the nine funded programs, the statutory notice and agenda obligations exist and apply to claimants only because they have *elected* to participate in, or continue to participate in, the various underlying funded programs--and hence to incur notice and agenda costs that are a condition of program participation. Accordingly, no reimbursable state mandate exists with regard to any of these programs based upon a theory that such costs were incurred under legal compulsion. [15]

15 In this case, we have no occasion to decide whether a reimbursable state mandate would arise in a situation in which a local entity voluntarily has elected to participate in a program but also has committed to continue its participation for a specified number of years, and the state imposes additional requirements at a time when the local entity is not free to end its participation. [*746]

b.

The Commission and amicus curiae Education Legal Alliance also assert that the Chacon-Moscone Bilingual-Bicultural Education Act of 1976 (another "sunsetted," but still funded, program; Ed. Code, § 52160 et

seq., 62000, 62000.2, subd. (d), 62002) legally compels school districts to establish advisory committees, regardless whether the district participates in the underlying funded program to which the advisory committees apply. The Commission and amicus curiae rely upon Education Code section 52176's command that each school district with more than 50 pupils of limited English language proficiency, and each school within that district with more than 20 pupils of such proficiency, "*shall* establish a districtwide [or individual school site] advisory committee on bilingual education." (*Id.*, subds. (a) & (b), italics added.)

The Department of Finance responds that because the Chacon-Moscone Bilingual-Bicultural Education program sunsetted in 1987, school districts that have participated in that program since that date have done so not as a matter of legal compulsion, but by their own choice made when they applied for and were granted such program funds.

We note some support for the Department's view. Education Code section 64000 et seq., which governs the funding application process, includes the "sunsetted" Chacon-Moscone Bilingual-Bicultural Education program as one of many optional programs for which a district *may* seek funding. (*Id.*, subd. (a)(4).) But, the Commission argues, another statutory provision suggests that Chacon-Moscone Bilingual-Bicultural Education program advisory committees are mandatory in any event. The Commission notes that section 62002.5 provides that advisory committees "which are in existence pursuant to statutes or regulations as of January 1, 1979, *shall continue* subsequent to termination of funding for the programs sunsetted by this chapter." (Italics added.)

We need not, and do not, determine whether claimants have been legally compelled to participate in the Chacon-Moscone Bilingual-Bicultural Education program, or to maintain a related advisory committee. Even if we assume for purposes of analysis that claimants have been legally compelled to participate in the Chacon-Moscone Bilingual-Bicultural Education [***253] program, we nevertheless conclude that under the circumstances here presented, [*747] the costs necessarily incurred in complying with the notice and agenda requirements under that funded program do not entitle claimants to obtain reimbursement under article XIII B, section 6, because the state, in providing program funds to claimants, already has provided funds that may be used to cover the necessary noticeand agenda-related expenses.

[**1216] We note that, based upon the evaluations made by the Commission, the costs associated with the notice and agenda requirements at issue in this case appear rather modest. [16] And, even more significantly, [HN26]we have found nothing to suggest that a school district is precluded from using a portion of the funds obtained from the state for the implementation of the underlying funded program to pay the associated notice and agenda costs. Indeed, the Chacon-Moscone Bilingual-Bicultural Education program explicitly authorizes school districts to do so. (See Ed. Code, § 52168, subd. (b) ["School districts may claim funds appropriated for purposes of this article for expenditures in, but not limited to, the following categories: [P] . . . [P] (6) Reasonable district administrative expenses . . . ."].) We believe it is plain that the costs of complying with program-related notice and agenda requirements qualify as "[r]easonable district administrative expenses." Therefore, even if we assume for purposes of analysis that school districts have been legally compelled to participate in the funded Chacon-Moscone Bilingual-Bicultural Education program, we view the state's provision of program funding as satisfying, in advance, any reimbursement requirement.

16 Costs of compliance with the notice and agenda requirements have been estimated as amounting to approximately $ 90 per meeting for the 1994-1995 fiscal year, and incrementally larger amounts in subsequent years, up to $ 106 per meeting for the 2000-2001 fiscal year, for each committee or advisory council. (See State Controller, State Mandated Costs Claiming Instrns. No. 2001-08, School Site Councils and Brown Act Reform (June 4, 2001), Parameters and Guidelines (Mar. 29, 2001) [and implementing forms].) Under these formulae, a district that has 10 schools, each with one council or advisory committee that meets 10 times a year, would be forced to incur approximately $ 9,000 to $ 10,000 in costs to comply with statutory notice and agenda requirements. Presumably, such costs are minimal relative to the funds allocated by the state to the school district under these programs. (We hereby grant the Commission's request that we take judicial notice of these and related documents, and of the Commission's December 13, 2001 Statewide Cost Estimate for reimbursement to school districts of noticeand agenda-related expenses.)

[HN27]It is conceivable, with regard to some programs, that increased compliance costs imposed by the state might become so great--or funded program grants might become so diminished--that funded program benefits would not cover the compliance costs, or that expenditure of granted program funds on administrative costs might violate a spending limitation set out in applicable regulations or statutes. In those circumstances, a compulsory program participant likely would be able to

establish the existence of a reimbursable [*748] state mandate under article XIII B, section 6. But that certainly is not the situation faced by claimants in this case. At most, claimants, by being compelled to incur notice and agenda compliance costs--and pay those costs from program funds--have suffered a relatively minor diminution of program funds available to them for substantive program purposes. The circumstance that the program funds claimants may have wished to use exclusively for substantive program activities are [***254] thereby reduced, does not in itself transform the related costs into a reimbursable state mandate. (See *County of Sonoma, supra*, 84 Cal.App.4th 1264 [art. XIII B, § 6, provides no right of reimbursement when the state *reduces* revenue granted to local government].) Nor is there any reason to believe that use of granted program funds to pay the relatively modest costs here at issue would violate any applicable spending limitation. [17]

17 With regard to the Chacon-Moscone Bilingual-Bicultural Education program, claimants assert that "[s]tate regulations place a ceiling on the amount of program funds that may be expended for indirect costs at three percent of the district's funding . . . ." (5 Cal. Code Regs., §§ 3900(g) & 3947(a).) As the Department observes, applicable statutory provisions appear to set the limit for such expenses for the *same* program at no more than 15 percent of granted program funds. (See Ed. Code, §§ 63000, subd. (d), 63001.) Even assuming, for purposes of analysis, that the regulation, and not the statute, applies with regard to this program, it seems clear that the notice and agenda costs here at issue fall far below 3 percent of granted program funds. Indeed, claimants concede: "The notice and agenda costs at issue are administrative costs that appear to fall within [the regulatory] provisions."

We therefore conclude that because claimants are and have been free to use funds [**1217] from the Chacon-Moscone Bilingual-Bicultural Education program to pay required program expenses (including the notice and agenda costs here at issue), claimants are not entitled under article XIII B, section 6, to reimbursement from the state for such expenses.

B.(2a)

Claimants contend that even if they have not been *legally compelled* to participate in most of the programs listed in Education Code section 35147, subdivision (b), and hence have not been *legally required* to incur the related notice and agenda costs, they nevertheless have been compelled as a practical matter to participate in those programs and hence to incur such costs. Claimants assert that school districts have "had no true option or choice but to participate in these [underlying education-related] programs. *This absence of a reasonable alternative to participation is a de facto mandate.*" As explained below, on the facts of this case, we disagree.

[*749] 1.

Claimants and amici curiae supporting them, relying upon this court's broad interpretation of the federal mandate provision of article XIII B, section 9, [18] in *City of Sacramento, supra*, 50 Cal.3d 51, 70-76, assert that we should recognize and endorse such a broader construction of section 6 of that article--a construction that does not limit the definition of a reimbursable state mandate to circumstances of *legal* compulsion.

18 That provision states: [HN28]" 'Appropriations subject to limitation' for each entity of government do not include: [P] . . . [P] (b) Appropriations required to comply with mandates of the courts or the federal government which, without discretion, require an expenditure for additional services or which unavoidably make the provision of existing services more costly."

In *City of Sacramento, supra*, 50 Cal.3d 51, we considered whether various federal "incentives" for states to extend unemployment insurance coverage to all public employees constituted a reimbursable [***255] state mandate under article XIII B, section 6, or a federal mandate within the meaning of article XIII B, section 9 .

We concluded in *City of Sacramento, supra*, 50 Cal.3d 51, that there was no reimbursable state mandate under article XIII B, section 6, because the implementing state legislation did not impose any new or increased "program or service," or "unique" requirement, upon local entities. (*City of Sacramento*, at pp. 66-70.)

Turning to the question whether the state legislation constituted a "federal mandate" under article XIII B, section 9, we acknowledged in *City of Sacramento, supra*, 50 Cal.3d 51, that there was no legal compulsion requiring the states to participate in the federal plan to extend unemployment insurance coverage to all public employees. We nevertheless found that the costs related to the program constituted a federal mandate, for purposes of article XIII B, section 9. Our opinion concluded that because the financial consequences to the state and its residents of failing to participate in the federal plan were so onerous and punitive--we characterized the consequences as amounting to "certain and severe federal penalties" including "double . . . taxation" and other "draconian" measures (*City of Sacramento*, at p. 74)--as a practical matter, for purposes of article XIII B, section 9, the state was mandated to participate in the federal plan to extend unemployment insurance coverage.

[*750] Claimants, echoing the reasoning of the Court of Appeal below, assert that because this court in *City of Sacramento, supra*, 50 Cal.3d 51, broadly construed the term "federal mandate"--to include not only the situation in which a state or local entity is itself legally compelled to participate in a program and thereby incur costs, but also the situation in which the governmental entity's participation in the federal program is the coerced result of severe penalties that would be imposed for noncompliance--consistency requires that we afford a similarly broad construction to the concept of a state mandate. In other words, claimants argue, the word "mandate," used in [**1218] two separate sections of article XIII B, should not be given two different meanings.

The Department and the Commission disagree. They assert that, to begin with, a finding of a *federal mandate* under section 9 of article XIII B has a wholly different purpose and effect as compared with a finding of a *state mandate* under section 6 of that article. The Department and the Commission argue that although a finding of a state mandate may result in reimbursement from the state to a local entity for costs incurred by the local entity, expenditures made in order to comply with a federal mandate are excluded from the constitutional spending cap imposed by article XIII B upon any affected state or local entity, because such expenditures are not considered to be an exercise of the state or local authority's discretionary spending authority.

Moreover, the Department and the Commission assert, our conclusion in *City of Sacramento, supra*, 50 Cal.3d 51, regarding the proper construction of article XIII B, *section 9*, relied upon "crucial facts" (*City of Sacramento*, at p. 73) that do not pertain to the wholly separate issue that we face here--the proper interpretation of article XIII B, *section 6*. They observe that, as we explained in *City of Sacramento*, when article XIII B was enacted: "First, the power of the federal government to impose its direct regulatory will on state and local agencies was *then* sharply in doubt. [19] Second, in conformity with [***256] this principle, the vast bulk of cost-producing federal influence on government at the state and local levels was by inducement or incentive rather than direct [legal] compulsion. That remains so to this day. [P] Thus, if article XIII B's reference to 'federal mandates' were limited to strict legal compulsion by the federal government, it would have been largely superfluous. [HN29]It is well settled that 'constitutional . . . enactments must receive a liberal, practical common-sense construction which will meet changed conditions and the growing needs of the people. [Citations.] . . . .' ([*751] *Amador Valley Joint Union High Sch. Dist. v. State Bd. of Equalization* (1978) 22 Cal.3d 208, 245 [149 Cal. Rptr. 239, 583 P.2d 1281].) While '[a] constitutional amendment should be construed in accordance with the natural and ordinary meaning of its words[,] [citation] [, t]he literal language of enactments may be disregarded to avoid absurd results and to fulfill the apparent intent of the framers. [Citations.]' (*Ibid.*)" (*City of Sacramento, supra*, 50 Cal.3d 51, 73, fns. omitted.)

19 See discussion in *City of Sacramento, supra*, 50 Cal.3d at pages 71-73.

The Department of Finance and the Commission argue that these factors have no bearing upon the proper interpretation of what constitutes a state mandate under article XIII B, section 6**(3)**. They assert that, unlike the federal government, which for a time was severely restricted in its ability to directly impose legal requirements upon the states (see *City of Sacramento, supra*, 50 Cal.3d 51, 71-73), the State of California has suffered no such restriction, vis-a-vis local government entities, except in matters involving purely local affairs. [20] **(2b)** Accordingly, the Department and the Commission argue, in contrast with the situation we faced when construing article XIII B, section 9, we would not render superfluous the restriction in section 6 of that article, were we narrowly to interpret its term "mandate" to include only programs in which local entities are legally compelled to participate.

20 [HN30]Unlike the federal-state relationship, sovereignty is not an issue between state and local governments. Claimant school districts are agencies of the state, and not separate or distinct political entities. (See *California Teachers Assn. v. Huff* (1992) 5 Cal.App.4th 1513, 1524 [7 Cal. Rptr. 2d 699].)

We find it unnecessary to resolve whether our reasoning in *City of Sacramento, supra*, 50 Cal.3d 51, applies with regard to the proper interpretation of the term "state mandate" in section 6 of article XIII B. Even assuming, for purposes of analysis only, that our construction of the term "federal mandate" in *City of Sacramento, supra*, 50 Cal.3d 51, applies equally in [**1219] the context of article XIII B, section 6, for reasons set out below we conclude that, contrary to the situation we described in that case, claimants here have not faced "certain and severe . . . penalties" such as "double . . . taxation" and other "draconian" consequences (*City of Sacramento, supra*, 50 Cal.3d at p. 74), and hence have not been "mandated," under article XIII B, section 6 to incur increased costs.

2.

(4) As we observed in *County of San Diego, supra*, 15 Cal.4th 68, 81, article XIII B, section 6's

[HN31]"purpose is to preclude the state from shifting [*752] financial responsibility for carrying out governmental functions to local agencies, which are 'ill equipped' to assume increased financial responsibilities."**(2c)** In light of that purpose, we do not [***257] foreclose the possibility that a reimbursable state mandate under article XIII B, section 6, properly might be found in some circumstances in which a local entity is not legally compelled to participate in a program that requires it to expend additional funds.

As noted, claimants argue that they have had "no true option or choice" but to participate in the various programs here at issue, and hence to incur the various costs of compliance, and that "the absence of a reasonable alternative to participation is a de facto [reimbursable state] mandate." In the same vein, amici curiae on behalf of claimants emphasize that as a practical matter, many school districts depend upon categorical funding for various programs. Amicus curiae California State Association of Counties asks us to interpret article XIII B, section 6, as providing state reimbursement for programs that are "*indirectly* state mandated." (Italics added.) Amicus curiae Education Legal Alliance goes so far as to assert that unless we recognize a right to reimbursement for costs such as those here at issue, "California schools could be forced to [forgo] participation in important categorical programs that supply necessary financial and educational support to those segments of the student population that need the most assistance. Alternatively, California schools could be forced to cut other student programs or services to fund these procedural requirements."

The record in the case before us does not support claimants' characterization of the circumstances in which they have been forced to operate, and provides no basis for resolving the accuracy of amici curiae's warnings and predictions. Indeed, we are skeptical of the assertions of claimants and amici curiae.

As observed *ante* (fn. 16), the costs associated with the notice and agenda requirements at issue in this case appear rather modest. Moreover, the parties have not cited, nor have we found, anything in the governing statutes or regulations, or in the record, to suggest that a school district is precluded from using a portion of the program funds obtained from the state to pay associated notice and agenda costs. As noted above, under the Chacon-Moscone Bilingual-Bicultural Education program (Ed. Code, § 52168, subd. (b)(6)), such authority has been granted. As to three of the remaining programs here at issue, [HN32]such authority also is explicit, or at least strongly implied. (See 20 U.S.C. § 7425(d) [federal Indian Education Program]; [*753] Ed. Code, §§ 63000, subds. (c), (g), 63001 [school improvement program and McAteer Act].) We do not perceive any reason why the Legislature would contemplate a different rule for any of the other programs here at issue, and claimants have advanced no such reason. [21]

21 Nor is there any reason to believe that expenditure of granted program funds on the notice and agenda costs at issue would violate any spending limitation set out in applicable regulations or statutes. Claimants assert that with regard to the school improvement programs, state regulations (Cal. Code Regs., tit. 5, §§ 3900, subd. (b), 3947 subd. (a)) limit spending on administrative expenses to no more than 3 percent of granted program funds. As the Department observes, [HN33]applicable statutory provisions appear to set the limit for such expenses for the *same* program at no more than 15 percent of granted program funds. (See Ed. Code, §§ 63000, subd. (c), 63001.) But even assuming, for purposes of analysis, that the regulations apply with regard to this program, claimants have made no showing that the notice and agenda costs here at issue exceed 3 percent of granted program funds. As noted *ante*, at page 732, statewide program grants for the school improvement programs alone amounted to approximately $ 394 million in fiscal year 1998-1999. According to the Commission, statewide notice and agenda costs for *all nine* of the programs here at issue amounted to only $ 5.2 million during that same period. (See Com. on State Mandates, Adopted Statewide Cost Estimate, Dec. 13, 2001, p. 1.)

Similarly, claimants have not demonstrated that the notice and agenda costs here at issue exceed the administrative costs spending limitations set for the federal Indian Education Program (see 20 U.S.C. § 7425(d) [5 percent limitation]) and for the McAteer Act's "compensatory education programs" (see Ed. Code, §§ 63000, subds. (g), 63001 [15 percent limitation].)

[**1220] [***258] As to each of the optional funded programs here at issue, school districts are, and have been, free to decide whether to (i) continue to participate and receive program funding, even though the school district also must incur program-related costs associated with the notice and agenda requirements, or (ii) decline to participate in the funded program. [HN34]Presumably, a school district will continue to participate only if it determines that the best interests of the district and its students are served by participation--in other words, if, *on balance*, the funded program, even with strings attached, is deemed beneficial. And, presumably, a school district will decline participation if and

when it determines that the costs of program compliance outweigh the funding benefits.

In essence, claimants assert that their participation in the education-related programs here at issue is so beneficial that, as a practical matter, they feel they must participate in the programs, accept program funds, and--by virtue of Government Code section 54952 and Education Code section 35147 -incur expenses necessary to comply with the procedural conditions imposed on program participants. [HN35]Although it is completely understandable that a participant in a funded program may be disappointed when additional requirements (with their attendant costs) are imposed as a condition of [*754] continued participation in the program, just as such a participant would be disappointed if the total amount of the annual funds provided for the program were reduced by legislative or gubernatorial action, the circumstance that the Legislature has determined that the requirements of an ongoing elective program should be modified does not render a local entity's decision whether to continue its participation in the modified program any less voluntary. [22] (See *County of Sonoma, supra,* 84 Cal.App.4th 1264 [Art. XIII B, § 6, provides no right of reimbursement when the state *reduces* revenue granted to local government].) We reject the suggestion, implicit in claimants' argument, that the state cannot legally provide school districts with funds for voluntary programs, and then effectively reduce that funding grant by requiring school districts to incur expenses in order to meet conditions of program participation.

> 22 Claimants assert that the notice and agenda requirements were imposed for the first time by Government Code section 54952 and Education Code section 35147 in the mid-1990's--"*after* the school districts decided to participate in the programs listed in Education Code section 35147." Even if we assume, contrary to the opposing position of the Department of Finance, that claimants first were subjected to notice and agenda requirements only after their respective school districts elected to participate in the programs, a school district's *continued* participation in the programs would be no less voluntary. As noted above, school districts have been, and remain, legally free to decline to continue to participate in the eight programs here at issue.

In sum, the circumstances presented in the case before us do not constitute the type of nonlegal compulsion that reasonably could constitute, in claimants' phrasing, a "de facto" reimbursable state mandate. Contrary to the situation that we described in *City of Sacramento,* 50 Cal.3d 51 [266 Cal. Rptr. 139, 785 P.2d 522],[HN36] [***259] a claimant that elects to discontinue participation in one of the programs here at issue does not face "certain and severe . . . penalties" such as "double . . . taxation" or other "draconian" consequences (*id.,* at p. 74), but simply must adjust to the withdrawal of grant money along with the lifting of program obligations. Such circumstances do not constitute a reimbursable [**1221] state mandate for purposes of article XIII B, section 6.

IV

For the reasons stated, we conclude that claimants have failed to establish that they are entitled to reimbursement under article XIII B, section 6 of the California Constitution, with regard to any of the program costs here at issue.

[*755] The judgment of the Court of Appeal is reversed.

Kennard, J., Baxter, J., Werdegar, J., Chin, J., Brown, J., and Moreno, J., concurred.

TAB "15"

LEXSEE

Caution
As of: Jun 23, 2010

THOMAS WILLIAM HAYES, as Director, etc., Plaintiff and Respondent, v. COMMISSION ON STATE MANDATES, Defendant, Cross-defendant, and Respondent; DALE S. HOLMES, as Superintendent, etc., Real Party in Interest, Cross-complainant and Appellant; WILLIAM CIRONE, as Superintendent, etc., Real Party in Interest and Respondent; STATE OF CALIFORNIA et al., Cross-defendants and Respondents.

No. C009519

COURT OF APPEAL OF CALIFORNIA, THIRD APPELLATE DISTRICT

11 Cal. App. 4th 1564; 15 Cal. Rptr. 2d 547; 1992 Cal. App. LEXIS 1498; 93 Cal. Daily Op. Service 17; 93 Daily Journal DAR 18

December 30, 1992, Decided

SUBSEQUENT HISTORY: [***1] Review Denied April 1, 1993, Reported at 1993 Cal. LEXIS 1988. Lucas, C.J., Kennard, J., and Arabian, J., are of the opinion the petition should be granted.

PRIOR HISTORY: Superior Court of Sacramento County, No. 352795, Eugene T. Gualco, Judge.

DISPOSITION: The judgment is affirmed.

CASE SUMMARY:

PROCEDURAL POSTURE: Appellant Riverside Schools sought review from a decision of the Superior Court of Sacramento County (California), which set aside an administrative decision that all local special education costs were state mandated and subject to state reimbursement and, denied appellant's writ of mandate that would have ordered respondent controller to issue a warrant in payment of its claim.

OVERVIEW: Appellant Riverside Schools filed claims seeking state reimbursement for alleged state-mandated costs incurred in connection with special education programs. After lengthy proceedings, the administrative agency decided that all local special education costs were state mandated and subject to reimbursement. On appeal, the lower court issued a writ of administrative mandate directing the agency to reconsider the matter and denying appellant's petition for a writ of mandate that would have directed issuance of a warrant in payment of its claim. The court affirmed the lower court decision and clarified the criteria to be applied by the administrative agency. The court concluded that, all financial assistance or funds under the Rehabilitation Education Act, 29 U.S.C.S. § 794 (1973) or, under the Education of the Handicapped Act, 20 U.S.C.S. § 1400 et seq., were federally mandated and thus, appellant was not entitled to reimbursement from the state for these types of programs.

OUTCOME: The court affirmed the judgment of the lower court, which set aside an administrative decision that all local special education costs were state mandated and subject to state reimbursement because the special education costs were federally mandated and thus, appellant Riverside Schools was not entitled to reimbursement from the state for these types of programs.

CORE TERMS: subvention, educational, reimbursement, mandated, special education, Handicapped Act, federal mandate, handicapped children, local agencies, school district's, handicapped, levels of service, local government's, local school districts, state-mandated, federal government, spending, accommodate, taxing, state mandates, funding, local agency, new programs, appropriation, Rehabilitation Act, state subvention, entity, fiscal year, Handicapped Act, public education

LexisNexis(R) Headnotes

Education Law > Departments of Education > State Departments of Education > Authority
Education Law > Departments of Education > U.S. Department of Education > Authority
[HN1]Essentially, the constitutional rule of state subvention provides that the state is required to pay for any new governmental programs, or for higher levels of service under existing programs, that it imposes upon local governmental agencies.

Education Law > Students > Right to Education
[HN2]States typically do purport to guarantee all of their children the opportunity for a basic education. In fact, in this state basic education is regarded as a fundamental All basic educational programs are essentially affirmative action activities in the sense that educational agencies are required to evaluate and accommodate the educational needs of the children in their districts.

Education Law > Departments of Education > U.S. Department of Education > Authority
Education Law > Discrimination > Individuals With Disabilities Education Act > Coverage
Governments > Legislation > Statutory Remedies & Rights
[HN3]Since the 1975 amendment, the Education of the Handicapped Act requires recipient states to demonstrate a policy that assures all handicapped children the right to a free appropriate education, 20 U.S.C.S. § 1412(1). The act is not merely a funding statute; rather, it establishes an enforceable substantive right to a free appropriate public education in recipient states.

Civil Rights Law > Protection of Disabled Persons > Rehabilitation Act > Remedies
Constitutional Law > Supremacy Clause > General Overview
Governments > State & Territorial Governments > Relations With Governments
[HN4]Federal financial assistance is not the only incentive for a state to comply with the Education of the Handicapped Act, 20 U.S.C.S. § 1400 et seq. Congress intends the act to serve as a means by which state and local educational agencies can fulfill their obligations under the equal protection and due process provisions of the Constitution and under § 504 of the Rehabilitation Act of 1973, 29 U.S.C.S. § 794. Accordingly, where it is applicable the act supersedes claims under the Civil Rights Act, 42 U.S.C.S. § 1983 and § 504 of the Rehabilitation Act of 1973, and the administrative remedies provided by the act constitute the exclusive remedy of handicapped children and their parents or other representatives.

Administrative Law > Judicial Review > General Overview
Constitutional Law > Supremacy Clause > General Overview
Education Law > Discrimination > Individuals With Disabilities Education Act > Enforcement
[HN5]As a result of the exclusive nature of the Education of the Handicapped Act, 20 U.S.C.S. § 1415(e)(2), dissatisfied parties in recipient states must exhaust their administrative remedies under the act before resorting to judicial intervention. This gives local agencies the first opportunity and the primary authority to determine appropriate placement and to resolve disputes. If a party is dissatisfied with the final result of the administrative process then he or she is entitled to seek judicial review in a state or federal court. In such a proceeding the court independently reviews the evidence but its role is restricted to that of review of the local decision and the court is not free to substitute its view of sound educational policy for that of the local authority.

Constitutional Law > State Constitutional Operation
Education Law > Students > Right to Education
[HN6]The constitutional provision requires state subvention when the Legislature or any State agency mandates a new program or higher level of service on local agencies. Cal. Const., art. XIII B, § 6.

Constitutional Law > State Constitutional Operation
Governments > Legislation > Interpretation
[HN7]As a general rule and unless the context clearly requires otherwise, reviewing court must assume that the meaning of a term or phrase is consistent throughout the entire act or constitutional article of which it is a part.

SUMMARY:

CALIFORNIA OFFICIAL REPORTS SUMMARY

Two school districts filed claims with the State Board of Control for state reimbursement of alleged state-mandated costs incurred in connection with special education programs. The board determined that the costs were state mandated and subject to reimbursement by the state. In a mandamus proceeding, the trial court entered a judgment by which it issued a writ of administrative

mandate directing the Commission on State Mandates (the successor to the board) to set aside the board's administrative decision and to reconsider the matter in light of an intervening decision by the California Supreme Court, and by which it denied the petition of one of the school districts for a writ of mandate that would have directed the State Controller to issue a warrant in payment of the district's claim. (Superior Court of Sacramento County, No. 352795, Eugene T. Gualco, Judge.)

The Court of Appeal affirmed. It held that the 1975 amendments to the federal Education of the Handicapped Act (20 U.S.C. § 1401 et seq.) constituted a federal mandate with respect to the state. However, even though the state had no real choice in deciding whether to comply with the act, the act did not necessarily require the state to impose all of the costs of implementation upon local school districts. The court held that to the extent the state implemented the act by freely choosing to impose new programs or higher levels of service upon local school districts, the costs of such programs or higher levels of service are state-mandated and subject to subvention under Cal. Const., art. XIII B, § 6. Thus, on remand to the commission, the court held, the commission was required to focus on the costs incurred by local school districts and on whether those costs were imposed by federal mandate or by the state's voluntary choice in its implementation of the federal program. (Opinion by Sparks, Acting P. J., with Davis and Scotland, JJ., concurring.)

HEADNOTES

CALIFORNIA OFFICIAL REPORTS HEADNOTES

Classified to California Digest of Official Reports

(1) State of California § 11 -- Fiscal Matters -- Reimbursement to Local Governments -- State-mandated Costs: Words, Phrases, and Maxims -- Subvention. --"Subvention" generally means a grant of financial aid or assistance, or a subsidy. The constitutional rule of state subvention provides that the state is required to pay for any new governmental programs, or for higher levels of service under existing programs, that it imposes upon local governmental agencies. This does not mean that the state is required to reimburse local agencies for any incidental cost that may result from the enactment of a state law; rather, the subvention requirement is restricted to governmental services that the local agency is required by state law to provide to its residents. The subvention requirement is intended to prevent the state from transferring the costs of government from itself to local agencies. Reimbursement is required when the state freely chooses to impose on local agencies any peculiarly governmental cost which they were not previously required to absorb.

(2) Schools § 4 -- School Districts -- Relationship to State. --A school district's relationship to the state is different from that of local governmental entities such as cities, counties, and special districts. Education and the operation of the public school system are matters of statewide rather than local or municipal concern. Local school districts are agencies of the state and have been described as quasi-municipal corporations. They are not distinct and independent bodies politic. The Legislature's power over the public school system is exclusive, plenary, absolute, entire, and comprehensive, subject only to constitutional constraints. The Legislature has the power to create, abolish, divide, merge, or alter the boundaries of school districts. The state is the beneficial owner of all school properties, and local districts hold title as trustee for the state. School moneys belong to the state, and the apportionment of funds to a school district does not give the district a proprietary interest in the funds. While the Legislature has chosen to encourage local responsibility for control of public education through local school districts, that is a matter of legislative choice rather than constitutional compulsion, and the authority that the Legislature has given to local districts remains subject to the ultimate and nondelegable responsibility of the Legislature.

(3) Property Taxes § 7.8 -- Real Property Tax Limitation -- Exemptions and Special Taxes -- Federally Mandated Costs. --Pursuant to Rev. & Tax. Code, § 2271 (local agency may levy rate in addition to maximum property tax rate to pay costs mandated by federal government that are not funded by federal or state government), costs mandated by the federal government are exempt from an agency's taxing and spending limits.

(4) State of California § 11 -- Fiscal Matters -- Reimbursement to Local Governments -- State-mandated Costs -- Costs Incurred Before Effective Date of Constitutional Provision. --Since Cal. Const., art. XIII B, requiring subvention for state mandates enacted after Jan. 1, 1975, had an effective date of July 1, 1980, a local agency may seek subvention for costs imposed by legislation after Jan. 1, 1975, but reimbursement is limited to costs incurred after July 1, 1980. Reimbursement for costs incurred before July 1, 1980, must be obtained, if at all, under controlling statutory law.

(5) Schools § 53 -- Parents and Students -- Right or Duty to Attend -- Handicapped Children -- Federal Rehabilitation Act -- Obligations Imposed on Districts. --Section 504 of the federal Rehabilitation Act of 1973 (29 U.S.C. § 794) does not only obligate local

school districts to prevent handicapped children from being excluded from school. States typically purport to guarantee all of their children the opportunity for a basic education. In California, basic education is regarded as a fundamental right. All basic educational programs are essentially affirmative action activities in the sense that educational agencies are required to evaluate and accommodate the educational needs of the children in their districts. Section 504 does not permit local agencies to accommodate the educational needs of some children while ignoring the needs of others due to their handicapped condition. The statute imposes an obligation upon local school districts to take affirmative steps to accommodate the needs of handicapped children.

(6) Schools § 53 -- Parents and Students -- Right or Duty to Attend -- Handicapped Children -- Education of the Handicapped Act. --The federal Education of the Handicapped Act (20 U.S.C. § 1401 et seq.), which since its 1975 amendment has required recipient states to demonstrate a policy that assures all handicapped children the right to a free appropriate education, is not merely a funding statute; rather, it establishes an enforceable substantive right to a free appropriate public education in recipient states. Congress intended the act to establish a basic floor of opportunity that would bring into compliance all school districts with the constitutional right to equal protection with respect to handicapped children. It is also apparent that Congress intended to achieve nationwide application.

(7) Civil Rights § 6 -- Education -- Handicapped -- Scope of Federal Statute. --Congress intended the Education of the Handicapped Act (20 U.S.C. § 1401 et seq.) to serve as a means by which state and local educational agencies could fulfill their obligations under the equal protection and due process provisions of the Constitution and under section 504 of the Rehabilitation Act of 1973 (29 U.S.C. § 794). Accordingly, where it is applicable, the act supersedes claims under the Civil Rights Act (42 U.S.C. § 1983) and section 504, and the administrative remedies provided by the act constitute the exclusive remedy of handicapped children and their parents or other representatives. As a result of the exclusive nature of the Education of the Handicapped Act, dissatisfied parties in recipient states must exhaust their administrative remedies under the act before resorting to judicial intervention.

(8a) (8b) State of California § 11 -- Fiscal Matters -- Reimbursement to Local Governments -- State-mandated Costs -- Special Education: Schools § 4 -- School Districts; Financing; Funds -- Special Education Costs -- Reimbursement by State. --The 1975 amendments to the federal Education of the Handicapped Act (20 U.S.C. § 1401 et seq.) constituted a federal mandate with respect to the state. However, even though the state had no real choice in deciding whether to comply with the act, the act did not necessarily require the state to impose all of the costs of implementation upon local school districts. To the extent the state implemented the act by freely choosing to impose new programs or higher levels of service upon local school districts, the costs of such programs or higher levels of service are state mandated and subject to subvention under Cal. Const., art. XIII B, § 6. Thus, on remand of a proceeding by school districts to the Commission on State Mandates for consideration of whether special education programs constituted new programs or higher levels of service mandated by the state entitling the districts to reimbursement, the commission was required to focus on the costs incurred by local school districts and whether those costs were imposed by federal mandate or by the state's voluntary choice in its implementation of the federal program.

(9) State of California § 11 -- Fiscal Matters -- Reimbursement to Local Governments -- Federally Mandated Costs. --The constitutional subvention provision (Cal. Const., art. XIII B, § 6) and the statutory provisions which preceded it do not expressly say that the state is not required to provide a subvention for costs imposed by a federal mandate. Rather, that conclusion follows from the plain language of the subvention provisions themselves. The constitutional provision requires state subvention when "the Legislature or any State agency mandates a new program or higher level of service" on local agencies. Likewise, the earlier statutory provisions required subvention for new programs or higher levels of service mandated by legislative act or executive regulation. When the federal government imposes costs on local agencies, those costs are not mandated by the state and thus would not require a state subvention. Instead, such costs are exempt from local agencies' taxing and spending limitations. This should be true even though the state has adopted an implementing statute or regulation pursuant to the federal mandate, so long as the state had no "true choice" in the manner of implementation of the federal mandate.

(10) Statutes § 28 -- Construction -- Language -- Consistency of Meaning Throughout Statute. --As a general rule and unless the context clearly requires otherwise, it must be assumed that the meaning of a term or phrase is consistent throughout the entire act or constitutional article of which it is a part.

(11) State of California § 11 -- Fiscal Matters -- Reimbursement to Local Governments -- Federally Mandated Costs -- Subvention. --Subvention prin-

ciples are part of a more comprehensive political scheme. The basic purpose of the scheme as a whole was to limit the taxing and spending powers of government. The taxing and spending powers of local agencies were to be "frozen" at existing levels with adjustments only for inflation and population growth. Since local agencies are subject to having costs imposed upon them by other governmental entities, the scheme provides relief in that event. If the costs are imposed by the federal government or the courts, then the costs are not included in the local government's taxing and spending limitations. If the costs are imposed by the state, then the state must provide a subvention to reimburse the local agency. Nothing in the scheme suggests that the concept of a federal mandate should have different meanings depending upon whether one is considering subvention or taxing and spending limitations. Thus, the criteria set forth in a California Supreme Court case concerning whether costs mandated by the federal government are exempt from an agency's taxing and spending limits are applicable when subvention is the issue.

(12) State of California § 11 -- Fiscal Matters -- Reimbursement to Local Governments -- State-mandated Costs -- Special Education -- Applicable Criteria in Determining Whether Subvention Required. --In a proceeding for a writ of mandate to direct the Commission on State Mandates to set aside an administrative decision by the State Board of Control (the commission's predecessor), in which the board found that all local special education costs were state mandated and thus subject to state reimbursement, the trial court did not err in determining that the board failed to consider the issues under the appropriate criteria as set forth in a California Supreme Court case concerning whether costs mandated by the federal government are exempt from an agency's taxing and spending limits. The board relied upon the "cooperative federalism" nature of the Education of the Handicapped Act (20 U.S.C. § 1401 et seq.) without any consideration of whether the act left the state any actual choice in the matter. It also relied on litigation involving another state. However, under the criteria set forth in the Supreme Court's case, the litigation in the other state did not support the board's decision but in fact strongly supported a contrary result.

(13) Courts § 34 -- Decisions and Orders -- Prospective and Retroactive Decisions -- Opinion Elucidating Existing Law. --In a California Supreme Court case concerning whether costs mandated by the federal government are exempt from an agency's taxing and spending limits, the court elucidated and enforced existing law. Under such circumstances, the rule of retrospective operation controls. Thus, in a proceeding for a writ of mandate to direct the Commission on State Mandates to set aside an administrative decision by the State Board of Control (the commission's predecessor), in which the board found that all local special education costs were state mandated and thus subject to state reimbursement, the trial court correctly applied the Supreme Court decision to the litigation pending before it.

COUNSEL: Biddle & Hamilton, W. Craig Biddle, Christian M. Keiner and F. Richard Ruderman for Real Party in Interest, Cross-complainant and Appellant.

Breon, O'Donnell, Miller, Brown & Dannis and Emi R. Uyehara as Amici Curiae on behalf of Real Party in Interest, Cross-complainant and Appellant.

No appearance for Real Party in Interest and Respondent.

Daniel E. Lungren, Attorney General, N. Eugene Hill, Assistant Attorney General, Cathy Christian and Marsha A. Bedwell, Deputy Attorneys General, and Daniel G. Stone for Plaintiff and Respondent.

Gary D. Hori for Defendant, Cross-defendant and Respondent.

Richard J. Chivaro and Patricia A. Cruz for Cross-defendants and Respondents.

JUDGES: Opinion by Sparks, Acting P. J., with Davis and Scotland, JJ., concurring.

OPINION BY: SPARKS, Acting P. J.

OPINION

[*1570] [**550] This appeal involves a decade-long battle over claims for subvention by two county superintendents of schools [***2] for reimbursement for mandated special education programs. Section 6 of article XIII B of the California Constitution directs, with exceptions not relevant here, that "[w]henever the Legislature or any State agency mandates a new program or higher level of service on any local government, the State shall provide a subvention of funds to reimburse such local government for the costs of such program or increased level of service, ..." The issue on appeal is whether the special education programs in question constituted new programs or higher levels of service mandated by the state entitling the school districts to reimbursement under section 6 of article XIII B of the California Constitution and related statutes for the cost of implementing them or whether these programs were instead mandated by the federal government for which no reimbursement is due.

The Santa Barbara County Superintendent of Schools and the Riverside County Superintendent of Schools each filed claims with the Board of Control for state reimbursement for alleged state-mandated costs incurred in connection with special education programs. After a lengthy administrative process, the Board of Control rendered a decision [***3] finding that all local special education costs were state mandated and subject to state reimbursement. That decision was then successfully challenged in the Sacramento County Superior Court. The superior court entered a judgment by which it: (1) issued a writ of administrative mandate (Code Civ. Proc., § 1094.5), directing the Commission on State Mandates (the successor to the Board of [*1571] Control) to set aside the administrative decision and to reconsider the matter in light of the California Supreme Court's intervening decision in *City of Sacramento v. State of California* (1990) 50 Cal.3d 51 [266 Cal.Rptr. 139, 785 P.2d 522]; and (2) denied the Riverside County Superintendent of School's petition for a writ of mandate (Code Civ. Proc., § 1085), which would have directed the State Controller to issue a warrant in payment of the claim. The Riverside County Superintendent of Public Schools appeals. We shall clarify the criteria to be applied by the Commission on State Mandates on remand and affirm the judgment.

I. THE PARTIES

This action was commenced in July 1987 by Jesse R. Huff, then the Director of the [***4] California Department of Finance. Huff petitioned for a writ of administrative mandate to set aside the administrative decision which found all the special education costs to be state mandated. On appeal Huff appears as a respondent urging that we affirm the judgment.

The Commission on State Mandates (the Commission) is the administrative agency which now has jurisdiction over local agency claims for reimbursement for state-mandated costs. (Gov. Code, § 17525.) In this respect the Commission is the successor to the Board of Control. The Board of Control rendered the administrative decision which is at issue here. Since an appropriation for payment of these claims was not included in a local government claims bill before January 1, 1985, administrative jurisdiction over the claims has been transferred from the Board of Control to the Commission. (Gov. Code, § 17630.) The Commission is the named defendant in the petition for a writ of administrative mandate. In the trial court and on appeal the Commission has appeared as the agency having administrative jurisdiction over the claims, but has not expressed a position on the merits of the litigation.

[**551] The Santa Barbara County Superintendent [***5] of Schools (hereafter Santa Barbara) is a claimant for state reimbursement of special education costs incurred in the 1979-1980 fiscal year. Santa Barbara is a real party in interest in the proceeding for administrative mandate. Santa Barbara has not appealed from the judgment of the superior court and, although a nominal respondent on appeal, has not filed a brief in this court.

The Riverside County Superintendent of Schools (hereafter Riverside) represents a consortium of school districts which joined together to provide special education programs to handicapped students. Riverside seeks reimbursement for special education costs incurred in the 1980-1981 fiscal year. [*1572] Riverside is a real party in interest in the proceeding for writ of administrative mandate. It filed a cross-petition for a writ of mandate directing the Controller to pay its claim. Riverside is the appellant in this appeal.

The State of California and the State Treasurer are named cross- defendants in Riverside's cross-petition for a writ of mandate. They joined with Huff in this litigation. The State Controller is the officer charged with drawing warrants for the payment of moneys from the State [***6] Treasury upon a lawful appropriation. (Cal. Const., art. XVI, § 7.) The State Controller is a named defendant in Riverside's petition for a writ of mandate. In the trial court and on appeal the State Controller expresses no opinion on the merits of Riverside's reimbursement claim, but asserts that the courts lack authority to compel him to issue a warrant for payment of the claim in the absence of an appropriation for payment of the claim.

In addition to the briefing by the parties on appeal, we have permitted a joint amici curiae brief to be filed in support of Riverside by the Monterey County Office of Education, the Monterey County Office of Education Special Education Local Planning Area, and 21 local school districts.

II. FACTUAL AND PROCEDURAL BACKGROUND

The Legislature has provided an administrative remedy for the resolution of local agency claims for reimbursement for state mandates. In *County of Contra Costa v. State of California* (1986) 177 Cal.App.3d 62 [222 Cal.Rptr. 750], at pages 71 and 72, we described these procedures as follows (with footnotes deleted): " Section 2250 [Revenue & Taxation Code] and those following [***7] it provide a hearing procedure for the determination of claims by local governments. The State Board of Control is required to hear and determine such claims. (§ 2250.) For purposes of such hearings the board consists of the members of the Board of Control provided for in part 4 (commencing with § 13900) of division 3 of title 2 of the Government Code, together

with two local government officials appointed by the Governor. (§ 2251.) The board was required to adopt procedures for receiving and hearing such claims. (§ 2252.) The first claim filed with respect to a statute or regulation is considered a 'test claim' or a 'claim of first impression.' (§ 2218, subd. (a).) The procedure requires an evidentiary hearing where the claimant, the Department of Finance, and any affected department or agency can present evidence. (§ 2252.) If the board determines that costs are mandated, then it must adopt parameters and guidelines for the reimbursement of such claims. (§ 2253.2.) The claimant or the state is entitled to commence an action in administrative mandate pursuant to Code of Civil Procedure section 1094.5 to set aside a decision of the board on the grounds that the board's decision [***8] is not supported by substantial evidence. (§ 2253.5.)

[*1573] "At least twice each calendar year the board is required to report to the Legislature on the number of mandates it has found and the estimated statewide costs of these mandates. (§ 2255, subd. (a).) In addition to the estimate of the statewide costs for each mandate, the report must also contain the reasons for recommending reimbursement. (§ 2255, subd. (a).) Immediately upon receipt of the report a local government claims bill shall be introduced in the Legislature which, when introduced, must contain an appropriation sufficient to pay for the estimated costs of the mandates. [**552] (§ 2255, subd. (a).) In the event the Legislature deletes funding for a mandate from the local government claims bill, then it may take one of the following courses of action: (1) include a finding that the legislation or regulation does not contain a mandate; (2) include a finding that the mandate is not reimbursable; (3) find that a regulation contains a mandate and direct that the Office of Administrative Law repeal the regulation; (4) include a finding that the legislation or regulation contains a reimbursable mandate and direct that the [***9] legislation or regulation not be enforced against local entities until funds become available; (5) include a finding that the Legislature cannot determine whether there is a mandate and direct that the legislation or regulation shall remain in effect and be enforceable unless a court determines that the legislation or regulation contains a reimbursable mandate in which case the effectiveness of the legislation or regulation shall be suspended and it shall not be enforced against a local entity until funding becomes available; or (6) include a finding that the Legislature cannot determine whether there is a reimbursable mandate and that the legislation or regulation shall be suspended and shall not be enforced against a local entity until a court determines whether there is a reimbursable mandate. (§ 2255, subd. (b).) If the Legislature deletes funding for a mandate from a local government claims bill but does not follow one of the above courses of action or if a local entity believes that the action is not consistent with article XIII B of the Constitution, then the local entity may commence a declaratory relief action in the Superior Court of the County of Sacramento to declare [***10] the mandate void and enjoin its enforcement. (§ 2255, subd. (c).)

"Effective January 1, 1985, the Legislature has established a new commission to consider and determine claims based upon state mandates. This is known as the Commission on State Mandates and it consists of the Controller, the Treasurer, the Director of Finance, the Director of the Office of Planning and Research, and a public member with experience in public finance, appointed by the Governor and approved by the Senate. (Gov. Code, § 17525.) 'Costs mandated by the state' are defined as 'any increased costs which a local agency or school district is required to incur after July 1, 1980, as a result of any statute enacted after January 1, 1975, or any executive order implementing any statute enacted on or after January 1, 1975, which [*1574] mandates a new program or higher level of service of an existing program within the meaning of Section 6 of Article XIII B of the California Constitution.' (Gov. Code, § 17514.) The procedures before the Commission are similar to those which were followed before the Board of Control. (Gov. Code, § 17500 et seq.) Any claims which had not been included in a local government claims [***11] bill prior to January 1, 1985, were to be transferred to and considered by the commission. (Gov. Code, § 17630; [Rev. & Tax. Code,] § 2239.)"

On October 31, 1980, Santa Barbara filed a test claim with the Board of Control seeking reimbursement for costs incurred in the 1979-1980 fiscal year in connection with the provision of special education services as required by Statutes 1977, chapter 1247, and Statutes 1980, chapter 797. Santa Barbara asserted that these acts should be considered an ongoing requirement of increased levels of service.

Santa Barbara's initial claim was based upon the "mandate contained in the two bills specified above [which require] school districts and county offices to provide full and formal due process procedures and hearings to pupils and parents regarding the special education assessment, placement and the appropriate education of the child." Santa Barbara asserted that state requirements exceeded those of federal law as reflected in section 504 of the Rehabilitation Act of 1973 (29 U.S.C. § 794). [1] Santa [**553] Barbara's initial claim was for $ 10,500 in state-mandated costs for the 1979-1980 fiscal year.

1 Section 794 of title 29 of the United States Code will of necessity play an important part in our discussion of the issues presented in this case.

That provision was enacted as section 504 of the Rehabilitation Act of 1973. (Pub.L. No. 93-112, tit. V, § 504 (Sept. 26, 1973) 87 Stat. 394.) It has been amended several times. (Pub.L. No. 95-602, tit. I, § 119, 122(d)(2) (Nov. 6, 1978) 92 Stat. 2982, 2987 [Rehabilitation, Comprehensive Services, and Developmental Disabilities Act of 1978]; Pub.L. No. 99- 506, tit. I, § 103(d)(2)(B), tit. X, § 1002(e)(4) (Oct. 21, 1986) 100 Stat. 1810, 1844; Pub.L. No. 100-259, § 4 (Mar. 22, 1988) 102 Stat. 29; Pub.L. No. 100-630, tit. II, § 206(d) (Nov. 7, 1988) 102 Stat. 3312.) The decisional authorities universally refer to the statute as "section 504." We will adhere to this nomenclature and subsequent references to section 504 will refer to title 29, United States Code, section 794.

[***12] During the administrative proceedings Santa Barbara amended its claim to reflect the following state-mandated activities alleged to be in excess of federal requirements: (1) the extension of eligibility to children younger and older than required by federal law; (2) the establishment of procedures to search for and identify children with special needs; (3) assessment and evaluation; (4) the preparation of "Individual Education Plans" (IEP's); (5) due process hearings in placement determinations; (6) substitute teachers; and (7) staff development programs. Santa Barbara was claiming reimbursement in excess of $ 520,000 for the cost of these services during the 1979- 1980 fiscal year.

[*1575] Also, during the administrative proceedings the focus of federally mandated requirements shifted from section 504 of the Rehabilitation Act to federal Public Law No. 94-142, which amended the Education of the Handicapped Act. (20 U.S.C. § 1401 et seq.) [2]

2 The Education of the Handicapped Act was enacted in 1970. (Pub.L. No. 91-230, tit. VI (Apr. 13, 1970) 84 Stat. 175.) It has been amended many times. The amendment of primary interest here was enacted as the Education for All Handicapped Children Act of 1975. (Pub.L. No. 94-142 (Nov. 29, 1975) 89 Stat. 774.) The 1975 legislation significantly amended the Education of the Handicapped Act, but did not change its short title. The Education of the Handicapped Act has now been renamed the Individuals with Disabilities Education Act. (Pub.L. No. 101-476, tit. IX, § 901(b)(21) (Oct. 30, 1990) 104 Stat. 1143; Pub.L. No. 101-476, tit. IX, § 901b; Pub.L. No. 102-119, § 25(b) (Oct. 7, 1991) 105 Stat. 607.) Since at all times relevant here the federal act was known as the Education of the Handicapped Act, we will adhere to that nomenclature.

[***13] The Board of Control adopted a decision denying Santa Barbara's claim. The board concluded that the Education of the Handicapped Act resulted in costs mandated by the federal government, that state special education requirements exceed those of federal law, but that "the resulting mandate is not reimbursable because the Legislature already provides funding for all Special Education Services through an appropriation in the annual Budget Act."

Santa Barbara sought judicial review by petition for a writ of administrative mandate. The superior court found the administrative record and the Board of Control's findings to be inadequate. Judgment was rendered requiring the Board of Control to set aside its decision and to rehear the matter to establish a proper record, including findings. That judgment was not appealed.

On October 30, 1981, Riverside filed a test claim for reimbursement of $ 474,477 in special education costs incurred in the 1980-1981 fiscal year. Riverside alleged that the costs were state mandated by chapter 797 of Statutes 1980. The basis of Riverside's claim was Education Code section 56760, a part of the state special education funding formula which, according [***14] to Riverside, "mandates a 10%% cap on ratio of students served by special education and within that 10%% mandates the ratio of students to be served by certain services." Riverside explained that chapter 797 of Statutes 1980 was enacted as urgency legislation effective July 28, 1980, and that at that time it was already "locked into" providing special education services to more than 13 percent of its students in accordance with prior state law and funding formulae. [3]

3 The 1980 legislation required that a local agency adopt an annual budget plan for special education services. (Ed. Code, § 56200.) Education Code section 56760 provided that in the local budget plan the ratio of students to be served should not exceed 10 percent of total enrollment. However, those proportions could be waived for undue hardship by the Superintendent of Public Instruction. (Ed. Code, § 56760, 56761.) In addition, the 1980 legislation included provisions for a gradual transition to the new requirements. (Ed. Code, § 56195 et seq.) The transitional provisions included a guarantee of state funding for 1980-1981 at prior student levels with an inflationary adjustment of 9 percent. (Ed. Code, § 56195.8.) The record indicates that Riverside applied for a waiver of the requirements of Education Code section 56760, but that the waiver request was denied due to a shortage of state funding. It also appears that Riverside did not receive all of the 109 percent funding guarantee under

Education Code section 56195.8. In light of the current posture of this appeal we need not and do not consider whether the failure of the state to appropriate sufficient funds to satisfy its obligations under the 1980 legislation can be addressed in a proceeding for the reimbursement of state-mandated costs or must be addressed in some other manner.

[***15] [**554] The Riverside claim, like Santa Barbara's, evolved over time with increases in the amount of reimbursement sought. Eventually the Board of [*1576] Control denied Riverside's claim for the same reasons the Santa Barbara claim was denied. Riverside sought review by petition for a writ of administrative mandate. In its decision the superior court accepted the board's conclusions that the Education of the Handicapped Act constitutes a federal mandate and that state requirements exceed those of the federal mandate. However, the court disagreed with the board that any appropriation in the state act necessarily satisfies the state's subvention obligation. The court concluded that the Board of Control had failed to consider whether the state had fully reimbursed local districts for the state-mandated costs which were in excess of the federal mandate, and the matter was remanded for consideration of that question. That judgment was not appealed.

On return to the Board of Control, the Santa Barbara claim and the Riverside claim were consolidated. The Board of Control adopted a decision holding that all special education costs under Statutes 1977, chapter 1247, and Statutes 1980, chapter [***16] 797, are state-mandated costs subject to subvention. The board reasoned that the federal Education of the Handicapped Act is a discretionary program and that section 504 of the Rehabilitation Act does not require school districts to implement any programs in response to federal law, and therefore special education programs are optional in the absence of a state mandate.

The claimants were directed to draft, and the Board of Control adopted, parameters and guidelines for reimbursement of special education costs. The board submitted a report to the Legislature estimating that the total statewide cost of reimbursement for the 1980-1981 through 1985-1986 fiscal years would be in excess of $ 2 billion. Riverside's claim for reimbursement for the 1980-1981 fiscal year was now in excess of $ 7 million. Proposed legislation which would have appropriated funds for reimbursement of special education costs during the 1980-1981 through 1985- 1986 fiscal years failed to pass in the Legislature. (Sen. Bill No. 1082 (1985-1986 Reg. Sess.).) A separate bill which would have appropriated funds to reimburse Riverside [*1577] for its 1980-1981 claim also failed to pass. (Sen. Bill No. 238 [***17] (1987-1988 Reg. Sess.).)

At this point Huff, as Director of the Department of Finance, brought an action in administrative mandate seeking to set aside the decision of the Board of Control. Riverside cross-petitioned for a writ of mandate directing the state, the Controller and the Treasurer to issue a warrant in payment of its claim for the 1980-1981 fiscal year.

The superior court concluded that the Board of Control did not apply the appropriate standard in determining whether any portion of local special education costs are incurred pursuant to a federal mandate. The court found that the definition of a federal mandate set forth by the *Supreme Court in* *City of Sacramento v. State of California, supra,* 50 Cal.3d 51, "marked a departure from the narrower 'no discretion' test" of this court's earlier decision in *City of Sacramento v. State of California* (1984) 156 Cal.App.3d 182 [203 Cal.Rptr. 258]. It further found that the standard set forth in the high court's decision in *City of Sacramento* "is to be applied retroactively." Accordingly, the superior court issued a [***18] peremptory writ of mandate directing the Commission on State Mandates to set aside [**555] the decision of the Board of Control, to reconsider the claims in light of the decision in *City of Sacramento v. State of California, supra,* 50 Cal.3d 51, and "to ascertain whether certain costs arising from Chapter 797/80 and Chapter 1247/77 are federally mandated, and if so, the extent, if any, to which the state-mandated costs exceed the federal mandate." Riverside's cross-petition for a writ of mandate was denied. This appeal followed.

III. PRINCIPLES OF SUBVENTION

(1) "Subvention" generally means a grant of financial aid or assistance, or a subsidy. (See Webster's Third New Internat. Dict. (1971) p. 2281.) As used in connection with state-mandated costs, the basic legal requirements of subvention can be easily stated; it is in the application of the rule that difficulties arise.

[HN1]Essentially, the constitutional rule of state subvention provides that the state is required to pay for any new governmental programs, or for higher levels of service under existing programs, that it imposes upon local governmental agencies. (*County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 56 [233 Cal.Rptr. 38, 729 P.2d 202].) [***19] This does not mean that the state is required to reimburse local agencies for any incidental cost that may result from the enactment of a state law; rather, the subvention requirement is restricted to governmental services which the local agency is required by [*1578] state law to provide to its residents. (*City of Sacramento v. State of California, supra,* 50 Cal.3d at p. 70.) The subvention requirement is intended to prevent the state from transferring the costs of government from itself to local agen-

cies. (*Id.* at p. 68.) Reimbursement is required when the state "freely chooses to impose on local agencies *any* peculiarly 'governmental' cost which they were not previously required to absorb." (*Id.* at p. 70, italics in original.)

The requirement of subvention for state-mandated costs had its genesis in the "Property Tax Relief Act of 1972" which is also known as "SB 90" (Senate Bill No. 90). (*City of Sacramento v. State of California, supra,* 156 Cal.App.3d at p. 188.) That act established limitations upon the power of local governments to levy taxes and concomitantly prevented [***20] the state from imposing the cost of new programs or higher levels of service upon local governments. (Ibid.) The Legislature declared: "It is the intent in establishing the tax rate limits in this chapter to establish limits that will be flexible enough to allow local governments to continue to provide existing programs, that will be firm enough to insure that the property tax relief provided by the Legislature will be long lasting and that will afford the voters in each local government jurisdiction a more active role in the fiscal affairs of such jurisdictions." (Rev. & Tax. Code, former § 2162, Stats. 1972, ch. 1406, § 14.7, p. 2961.) [4] The act provided that the state would pay each county, city and county, city, and special district the sums which were sufficient to cover the total cost of new state-mandated costs. (See Rev. & Tax. Code, former § 2164.3, Stats. 1972, ch. 1406, § 14.7, pp. 2962-2963.) New state-mandated costs would arise from legislative action or executive regulation after January 1, 1973, which mandated a new program or higher level of service under an existing mandated program. (Ibid.)

4 In addition to requiring subventions for new state programs and higher levels of service, Senate Bill No. 90 required the state to reimburse local governments for revenues lost by the repeal or reduction of property taxes on certain classes of property. In this connection the Legislature said: "It is the purpose of this part to provide property tax relief to the citizens of this state, as undue reliance on the property tax to finance various functions of government has resulted in serious detriment to one segment of the taxpaying public. The subventions from the State General Fund required under this part will serve to partially equalize tax burdens among all citizens, and the state as a whole will benefit." (Gov. Code, § 16101, Stats. 1972, ch. 1406, § 5, p. 2953.)

[***21] (2) [**556] (See fn. 5.) Senate Bill No. 90 did not specifically include school districts in the group of agencies entitled to reimbursement for state-mandated costs. [5] (Rev. & Tax. Code, former § 2164.3, Stats. 1972, ch. 1406. § 14.7, pp. 2962-2963.) In fact, at that time methods of financing education in this state were [*1579] undergoing fundamental reformation as the result of the litigation in *Serrano v. Priest* (1971) 5 Cal.3d 584 [96 Cal.Rptr. 601, 487 P.2d 1241, 41 A.L.R.3d 1187]. At the time of the *Serrano* decision local property taxes were the primary source of school revenue. (*Id.* at p. 592.) In *Serrano,* the California Supreme Court held that education is a fundamental interest, that wealth is a suspect classification, and that an educational system which produces disparities of opportunity based upon district wealth would violate principles of equal protection. (*Id.* at pp. 614-615, 619.) A major portion of Senate Bill No. 90 constituted new formulae for state and local contributions to education in a legislative response to the decision in *Serrano.* (Stats. 1972, ch. 1406, § 1.5-2.74, pp. 2931-2953. See *Serrano v. Priest* (1976) 18 Cal.3d 728, 736- 737 [135 Cal.Rptr. 345, 557 P.2d 929].) [***22] [6]

5 A school district's relationship to the state is different from that of local governmental entities such as cities, counties, and special districts. Education and the operation of the public school system are matters of statewide rather than local or municipal concern. (*California Teachers Assn. v. Huff* (1992) 5 Cal.App.4th 1513, 1524 [7 Cal.Rptr.2d 699].) Local school districts are agencies of the state and have been described as quasi-municipal corporations. (*Ibid.*) They are not distinct and independent bodies politic. (*Ibid.*) The Legislature's power over the public school system has been described as exclusive, plenary, absolute, entire, and comprehensive, subject only to constitutional constraints. (*Ibid.*) The Legislature has the power to create, abolish, divide, merge, or alter the boundaries of school districts. (*Id.* at p. 1525.) The state is the beneficial owner of all school properties and local districts hold title as trustee for the state. (*Ibid.*) School moneys belong to the state and the apportionment of funds to a school district does not give the district a proprietary interest in the funds. (*Ibid.*) While the Legislature has chosen to encourage local responsibility for control of public education through local school districts, that is a matter of legislative choice rather than constitutional compulsion and the authority that the Legislature has given to local districts remains subject to the ultimate and nondelegable responsibility of the Legislature. (*Id.* at pp. 1523-1524.)

[***23]

6 After the first *Serrano* decision, the United States Supreme Court held that equal protection does not require dollar-for-dollar equality between school districts. (*San Antonio School*

District v. Rodriguez (1973) 411 U.S. 1, 33-34 48-56, 61-62 [36 L.Ed.2d 16, 42-43, 51-56, 59-60, 93 S.Ct. 1278].) In the second *Serrano* decision, the California Supreme Court adhered to the first *Serrano* decision on independent state grounds. (*Serrano v. Priest, supra,* 18 Cal.3d at pp. 761-766.) The court concluded that Senate Bill No. 90 and Assembly Bill No. 1267, enacted the following year (Stats. 1973, ch. 208, p. 529 et seq.), did not satisfy equal protection principles. (*Serrano v. Priest, supra,* 18 Cal.3d at pp. 776-777.) Additional complications in educational financing arose as the result of the enactment of article XIII A of the California Constitution at the June 1978 Primary Election (Proposition 13), which limited the taxes which can be imposed on real property and forced the state to assume greater responsibility for financing education (see Ed. Code, § 41060), and the enactment of Propositions 98 and 111 in 1988 and 1990, respectively, which provide formulae for minimum state funding for education. (See generally *California Teachers Assn. v. Huff, supra,* 5 Cal.App.4th 1513.)

[***24] The provisions of Senate Bill No. 90 were amended and refined in legislation enacted the following year. (Stats. 1973, ch. 358.) Revenue and Taxation Code section 2231, subdivision (a), was enacted to require the state to reimburse local agencies, including school districts, for the full costs of new programs or increased levels of service mandated by the Legislature after January 1, 1973. Local agencies except school districts were also entitled to reimbursement for costs mandated by executive regulation after January 1, 1973. (Rev. & Tax. Code, § 2231, subd. (d), added by Stats. 1973, ch. 358, § 3, p. 783 [*1580] and repealed by Stats. 1986, ch. 879, § 23, p. 3045.) In subsequent years legislation was enacted to entitle school districts to subvention for state-mandated costs imposed by legislative acts after January 1, 1973, or by executive regulation after January 1, 1978. (Rev. & Tax. Code, former § 2207.5, added by Stats. 1977, ch. 1135, § 5, p. 3646 and amended by Stats. 1980, ch. 1256, § 5, pp. 4248-4249.)

[**557] In the 1973 legislation, Revenue and Taxation Code section 2271 was enacted to provide, among other things: "A local agency may levy, or have levied on its behalf, [***25] a rate in addition to the maximum property tax rate established pursuant to this chapter (commencing with Section 2201) to pay costs mandated by the federal government or costs mandated by the courts or costs mandated by initiative enactment, which are not funded by federal or state government." (3) In this respect costs mandated by the federal government are exempt from an agency's taxing and spending limits. (*City of Sacramento v. State of California, supra,* 50 Cal.3d at p. 71, fn. 17.)

At the November 6, 1979, General Election, the voters added article XIII B to the state Constitution by enacting Proposition 4. That article imposes spending limits on the state and all local governments. For purposes of article XIII B the term "local government" includes school districts. (Cal. Const., art. XIII B, § 8, subd. (d).) The measure accomplishes its purpose by limiting a governmental entity's annual appropriations to the prior year's appropriations limit adjusted for changes in the cost of living and population growth, except as otherwise provided in the article. (Cal. Const., art. XIII B, § 1.) [7] The appropriations subject [***26] to limitation do not include, among other things: "Appropriations required to comply with mandates of the courts or the federal government which, without discretion, require an expenditure for additional services or which unavoidably make the provision of existing services more costly." (Cal. Const., art. XIII B, § 9, subd. (b).)

7 As it was originally enacted, article XIII B required that all governmental entities return revenues in excess of their appropriations limits to the taxpayers through tax rate or fee schedule revisions. In Proposition 98, adopted at the November 1988 General Election, article XIII B was amended to provide that half of state excess revenues would be transferred to the state school fund for the support of school districts and community college districts. (See Cal. Const., art. XVI, § 8.5; *California Teachers Assn. v. Huff, supra,* 5 Cal.App.4th 1513.)

Like its statutory predecessor, the constitutional initiative measure includes a provision [***27] designed "to preclude the state from shifting to local agencies the financial responsibility for providing public services in view of these restrictions on the taxing and spending power of the local entities." (*Lucia Mar Unified School Dist. v. Honig* (1988) 44 Cal.3d 830, 835-836 [244 Cal.Rptr. 677, 750 P.2d 318].) Section 6 of article XIII B of the state Constitution provides: "Whenever the Legislature or any State agency mandates a new program or higher level of service on any local government, the [*1581] State shall provide a subvention of funds to reimburse such local government for the costs of such program or increased level of service, except that the Legislature may, but need not, provide such subvention of funds for the following mandates: [P] (a) Legislative mandates requested by the local agency affected; [P] (b) Legislation defining a new crime or changing an existing definition of a crime; or [P] (c) Legislative mandates enacted prior to January 1, 1975, or executive orders or

regulations initially implementing legislation enacted prior to January 1, 1975."

Although article XIII B of the state Constitution [***28] requires subvention for state mandates enacted after January 1, 1975, the article had an effective date of July 1, 1980. (Cal. Const., art. XIII B, § 10.) **(4)** Accordingly, under the constitutional provision, a local agency may seek subvention for costs imposed by legislation after January 1, 1975, but reimbursement is limited to costs incurred after July 1, 1980. (*City of Sacramento v. State of California, supra,* 156 Cal.App.3d at pp. 190-193.) Reimbursement for costs incurred before July 1, 1980, must be obtained, if at all, under controlling statutory law. (See 68 Ops.Cal.Atty.Gen. 244 (1985).)

The constitutional subvention provision, like the statutory scheme before it, requires state reimbursement whenever "the Legislature or any State agency" mandates a new program or higher level of service. (Cal. Const., art. XIII B, § 6.) Accordingly, it has been held that state [**558] subvention is not required when the federal government imposes new costs on local governments. (*City of Sacramento v. State of California, supra,* 156 Cal.App.3d at p. 188; see also *Carmel Valley Fire Protection Dist. v. State of California* (1987) 190 Cal.App.3d 521, 543 [234 Cal.Rptr. 795].) [***29] In our *City of Sacramento* decision this court held that a federal program in which the state participates is not a federal mandate, regardless of the incentives for participation, unless the program leaves state or local government with no discretion as to alternatives. (156 Cal.App.3d at p. 198.)

In its *City of Sacramento* opinion, [8] the California Supreme Court rejected this court's earlier formulation. In doing so the high court noted that the vast bulk of cost-producing federal influence on state and local government is by inducement or incentive rather than direct compulsion. (50 Cal.3d at p. 73.) However, "certain regulatory standards imposed by the federal government [*1582] under 'cooperative federalism' schemes are coercive on the states and localities in every practical sense." (*Id.* at pp. 73-74.) The test for determining whether there is a federal mandate is whether compliance with federal standards "is a matter of true choice," that is, whether participation in the federal program "is truly voluntary." (*Id.* at p. 76.) The court went on to say: "Given the variety [***30] of cooperative federal-state-local programs, we here attempt no final test for 'mandatory' versus 'optional' compliance with federal law. A determination in each case must depend on such factors as the nature and purpose of the federal program; whether its design suggests an intent to coerce; when state and/or local participation began; the penalties, if any, assessed for withdrawal or refusal to participate or comply; and any other legal and practical consequences of nonparticipation, noncompliance, or withdrawal." (*Ibid.*)

8 The Supreme Court's decision in *City of Sacramento* was not a result of direct review of this court's decision. The Supreme Court denied a petition for review of this court's *City of Sacramento* decision. After the Board of Control had adopted parameters and guidelines for reimbursement under this court's decision, the Legislature failed to appropriate the funds necessary for such reimbursement. The litigation which resulted in the Supreme Court's *City of Sacramento* decision was commenced as an action to enforce the result on remand from this court's *City of Sacramento* decision. (See 50 Cal.3d at p. 60.)

[***31] IV. SPECIAL EDUCATION

The issues in this case cannot be resolved by consideration of a particular federal act in isolation. Rather, reference must be made to the historical and legal setting of which the particular act is a part. Our consideration begins in the early 1970's.

In considering the 1975 amendments to the Education of the Handicapped Act, Congress referred to a series of "landmark court cases" emanating from 36 jurisdictions which had established the right to an equal educational opportunity for handicapped children. (See *Smith v. Robinson* (1984) 468 U.S. 992, 1010 [82 L.Ed.2d 746, 763, 104 S.Ct. 3457].) Two federal district court cases, *Pennsylvania Ass'n. Ret'd Child. v. Commonwealth of Pa.* (E.D.Pa. 1972) 343 F.Supp. 279 (see also *Pennsylvania Ass'n. Retard. Child. v. Commonwealth of Pa.* (E.D.Pa. 1971) 334 F.Supp. 1257), and *Mills v. Board of Education of District of Columbia* (D.D.C. 1972) 348 F.Supp. 866, were the most prominent of these judicial decisions. (See *Hendrick Hudson Dist. Bd. of Ed. v. Rowley* (1982) 458 U.S. 176, 180, fn. 2 [73 L.Ed.2d 690, 695, 102 S.Ct. 3034].) [***32]

In the Pennsylvania case, an association and the parents of certain retarded children brought a class action against the commonwealth and local school districts in the commonwealth, challenging the exclusion of retarded children from programs of education and training in the public schools. (*Pennsylvania Ass'n. Ret'd. Child. v. Commonwealth of Pa., supra,* 343 F.Supp. at p. 282.) The matter was assigned to a three- judge panel which heard evidence on the plaintiffs' due process and equal protection claims. (*Id.* at p. 285.) The parties [**559] then agreed to resolve the litigation by means of a consent [*1583] judgment. (*Ibid.*) The consent agreement required the defendants to locate and evaluate all children in need of special education services, to reevaluate placement decisions periodically, and to accord due

process hearings to parents who are dissatisfied with placement decisions. (*Id.* at pp. 303-306.) It required the defendants to provide "a free public program of education and training appropriate to the child's capacity." (*Id.* at p. 285, italics deleted.)

In view of the consent agreement the district court was not required to resolve the plaintiffs' equal [***33] protection and due process contentions. Rather, it was sufficient for the court to find that the suit was not collusive and that the plaintiffs' claims were colorable. The court found: "Far from an indication of collusion, however, the Commonwealth's willingness to settle this dispute reflects an intelligent response to overwhelming evidence against [its] position." (*Pennsylvania Ass'n, Ret'd. Child. v. Commonwealth of Pa., supra,* 343 F.Supp. at p. 291.) The court said that it was convinced the due process and equal protection claims were colorable. (*Id.* at pp. 295-296.)

In the *Mills* case, an action was brought on behalf of a number of school-age children with exceptional needs who were excluded from the Washington, D.C., public school system. (*Mills v. Board of Education of District of Columbia, supra,* 348 F.Supp. at p. 868.) The district court concluded that equal protection entitled the children to a public-supported education appropriate to their needs and that due process required a hearing with respect to classification decisions. (*Id.* at pp. 874-875.) The court said: "If sufficient funds are not available to finance [***34] all of the services and programs that are needed and desirable in the system then the available funds must be expended equitably in such manner that no child is entirely excluded from a publicly supported education consistent with his needs and ability to benefit therefrom. The inadequacies of the District of Columbia Public School System whether occasioned by insufficient funding or administrative inefficiency, certainly cannot be permitted to bear more heavily on the 'exceptional' or handicapped child than on the normal child." (*Id.* at p. 876.)

In the usual course of events, the development of principles of equal protection and due process as applied to special education, which had just commenced in the early 1970's with the authorities represented by the *Pennsylvania* and *Mills* cases, would have been fully expounded through appellate processes. However, the necessity of judicial development was truncated by congressional action. In the Rehabilitation Act of 1973, section 504, Congress provided: "No otherwise qualified handicapped individual in the United States, as defined in section 706(7) [now 706(8)] of this title, [*1584] shall, solely by reason of his handicap, [***35] be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance ...." (29 U.S.C. § 794, Pub.L. No. 93- 112, tit. V, § 504 (Sept. 26, 1973) 87 Stat. 394.) [9] Since federal assistance to education is pervasive (see, e.g., Ed. Code, § 12000- 12405, 49540 et seq., 92140 et seq.), section 504 was applicable to virtually all public educational programs in this and other states.

9 In section 119 of the Rehabilitation, Comprehensive Services, and Developmental Disabilities Act of 1978, the application of section 504 was extended to federal executive agencies and the United States Postal Service. (Pub.L. No. 95-602, tit. I, § 119 (Nov. 6, 1978) 92 Stat. 2982.) The section is now subdivided and includes subdivision (b), which provides that the section applies to all of the operations of a state or local governmental agency, including local educational agencies, if the agency is extended federal funding for any part of its operations. (29 U.S.C. § 794.) This latter amendment was in response to judicial decisions which had limited the application of section 504 to the particular activity for which federal funding is received. (See *Consolidated Rail Corporation v. Darrone* (1984) 465 U.S. 624, 635-636 [79 L.Ed.2d 568, 577-578, 104 S.Ct. 1248].)

[***36] The Department of Health, Education and Welfare (HEW) promulgated regulations to ensure compliance with section 504 [**560] by educational agencies. [10] The regulations required local educational agencies to locate and evaluate handicapped children in order to provide appropriate educational opportunities and to provide administrative hearing procedures in order to resolve disputes. The federal courts concluded that section 504 was essentially a codification of the equal protection rights of citizens with disabilities. (See *Halderman v. Pennhurst State School & Hospital* (E.D.Pa. 1978) 446 F.Supp. 1295, 1323.) Courts also held that section 504 embraced a private cause of action to enforce its requirements. (*Sherry v. New York State Ed. Dept.* (W.D.N.Y. 1979) 479 F.Supp. 1328, 1334; *Doe v. Marshall* (S.D.Tex. 1978) 459 F.Supp. 1190, 1192.) It was further held that section 504 imposed upon school districts and other public educational agencies "the duty of analyzing individually the needs of each handicapped student and devising a program which will enable each individual handicapped student to receive [***37] an appropriate, free public education. The failure to perform this analysis and structure a program suited to the needs of each handicapped child, constitutes discrimination against that child and a failure to provide an appropriate, free [*1585] public education for the handicapped child." (*Doe v. Marshall, supra,* 459 F.Supp. at p. 1191. See also *David H. v. Spring Branch Independent School Dist.* (S.D.Tex. 1983) 569 F.Supp. 1324, 1334; *Hal-*

derman v. Pennhurst State School & Hospital, supra, 446 F.Supp. at p. 1323.)

> 10 HEW was later dissolved and its responsibilities are now shared by the federal Department of Education and the Department of Health and Human Services. The promulgation of regulations to enforce section 504 had a somewhat checkered history. Initially HEW determined that Congress did not intend to require it to promulgate regulations. The Senate Public Welfare Committee then declared that regulations were intended. By executive order and by judicial decree in *Cherry v. Mathews* (D.D.C. 1976) 419 F.Supp. 922, HEW was required to promulgate regulations. The ensuing regulations were embodied in title 45 Code of Federal Regulations part 84, and are now located in title 34 Code of Federal Regulations part 104. (See *Southeastern Community College v. Davis* (1979) 442 U.S. 397, 404, fn. 4 [60 L.Ed.2d 980, 987, 99 S.Ct. 2361]; *N. M. Ass'n for Retarded Citizens v. State of N. M.* (10th Cir. 1982) 678 F.2d 847, 852.)

[***38] **(5)** Throughout these proceedings Riverside, relying upon the decision in *Southeastern Community College v. Davis, supra,* 442 U.S. 397 [60 L.Ed.2d 980], has contended that section 504 cannot be considered a federal mandate because it does not obligate local school districts to take any action to accommodate the needs of handicapped children so long as they are not excluded from school. That assertion is not correct.

In the *Southeastern Community College* case a prospective student with a serious hearing disability sought to be admitted to a postsecondary educational program to be trained as a registered nurse. As a result of her disability the student could not have completed the academic requirements of the program and could not have attended patients without full-time personal supervision. She sought to require the school to waive the academic requirements, including an essential clinical program, which she could not complete and to otherwise provide full-time personal supervision. That demand, the Supreme Court held, was beyond the scope of section 504, which did not require the school to modify its program affirmatively [***39] and substantially. (442 U.S. at pp. 409-410 [60 L.Ed.2d at pp. 990-991].)

The *Southeastern Community College* decision is inapposite. States typically do not guarantee their citizens that they will be admitted to, and allowed to complete, specialized postsecondary educational programs. State educational institutions often impose stringent admittance and completion requirements for such programs in higher education. In the *Southeastern Community College* case the Supreme Court simply held that an institution of higher education need not lower or effect substantial modifications of its standards in order to accommodate a handicapped person. (442 U.S. at p. 413 [60 L.Ed.2d at pp. 992-993].) The court did not hold that a primary or secondary [**561] educational agency need do nothing to accommodate the needs of handicapped children. (See *Alexander v. Choate* (1985) 469 U.S. 287, 301 [83 L.Ed.2d 661, 672, 105 S.Ct. 712].)

[HN2]States typically do purport to guarantee all of their children the opportunity for a basic [***40] education. In fact, in this state basic education is regarded as a fundamental right. (*Serrano v. Priest, supra,* 18 Cal.3d at pp. 765-766.) All basic educational programs are essentially affirmative action activities in the sense that educational agencies are required to evaluate and accommodate [*1586] the educational needs of the children in their districts. Section 504 would not appear to permit local agencies to accommodate the educational needs of some children while ignoring the needs of others due to their handicapped condition. (Compare *Lau v. Nichols* (1974) 414 U.S. 563 [39 L.Ed.2d 1, 94 S.Ct. 786], which required the San Francisco Unified School District to take affirmative steps to accommodate the needs of non-English speaking students under section 601 of the Civil Rights Act of 1964.)

Riverside's view of section 504 is inconsistent with congressional intent in enacting it. The congressional record makes it clear that section 504 was perceived to be necessary not to combat affirmative animus but to cure society's benign neglect of the handicapped. [***41] The record is replete with references to discrimination in the form of the denial of special educational assistance to handicapped children. In *Alexander v. Choate, supra,* 469 U.S. at pages 295 to 297 [83 L.Ed.2d at pages 668- 669], the Supreme Court took note of these comments in concluding that a violation of section 504 need not be proven by evidence of purposeful or intentional discrimination. With respect to the *Southeastern Community College v. Davis, supra,* 442 U.S. 397 case, the high court said: "The balance struck in *Davis* requires that an otherwise qualified handicapped individual must be provided with meaningful access to the benefit that the grantee offers. The benefit itself, of course, cannot be defined in a way that effectively denies otherwise qualified handicapped individuals the meaningful access to which they are entitled; to assure meaningful access, reasonable accommodations in the grantee's program or benefit may have to be made. ..." (*Alexander v. Choate, supra,* 469 U.S. at p. 301 [83 L.Ed.2d at p. 672], [***42] fn. omitted.)

Federal appellate courts have rejected the argument that the *Southeastern Community College* case means that pursuant to section 504 local educational agencies need do nothing affirmative to accommodate the needs

of handicapped children. (*N. M. Ass'n for Retarded Citizens v. State of N. M., supra,* 678 F.2d at pp. 852-853; *Tatro v. State of Texas* (5th Cir. 1980) 625 F.2d 557, 564 [63 A.L.R. Fed. 844].) [11] We are satisfied that section 504 does impose an obligation upon local school districts to accommodate the needs of handicapped children. However, as was the case with constitutional principles, full judicial development of section 504 as it relates to special education in elementary and secondary school districts was truncated by congressional action.

11 Following a remand and another decision by the Court of Appeals, the *Tatro* litigation, *supra,* eventually wound up in the Supreme Court. (*Irving Independent School Dist. v. Tatro* (1984) 468 U.S. 883 [82 L.Ed.2d 664, 104 S.Ct. 3371].) However, by that time the Education of the Handicapped Act had replaced section 504 as the means for vindicating the education rights of handicapped children and the litigation was resolved, favorably for the child, under that act.

[***43] [*1587] In 1974 Congress became dissatisfied with the progress under earlier efforts to stimulate the states to accommodate the educational needs of handicapped children. (*Hendrick Hudson Dist. Bd. of Ed. v. Rowley, supra,* 458 U.S. at p. 180 [73 L.Ed.2d at p. 695].) These earlier efforts had included a 1966 amendment to the Elementary and Secondary Education Act of 1965, and the 1970 version of the Education of the Handicapped Act. (*Ibid.*) The prior acts had been grant programs that did not contain specific guidelines for a state's use of grant funds. (*Ibid.*) In 1974 Congress greatly increased federal funding for education of the handicapped and simultaneously required recipient [**562] states to adopt a goal of providing full educational opportunities to all handicapped children. ([73 L.Ed.2d at pp. 695-696].) The following year Congress amended the Education of the Handicapped Act by enacting the Education for All Handicapped Children Act of 1975. ([73 L.Ed.2d at p. 696].)

[HN3]Since the 1975 amendment, the Education [***44] of the Handicapped Act has required recipient states to demonstrate a policy that assures all handicapped children the right to a free appropriate education. (20 U.S.C. § 1412(1).) (6) The act is not merely a funding statute; rather, it establishes an enforceable substantive right to a free appropriate public education in recipient states. (*Smith v. Robinson, supra,* 468 U.S. at p. 1010 [82 L.Ed.2d at p. 764].) To accomplish this purpose the act incorporates the major substantive and procedural requirements of the "right to education" cases which were so prominent in the congressional consideration of the measure. (*Hendrick Hudson Dist. Bd. of Ed. v. Rowley, supra,* 458 U.S. at p. 194 [73 L.Ed.2d at p. 704].) The substantive requirements of the act have been interpreted in a manner which is "strikingly similar" to the requirements of section 504 of the Rehabilitation Act of 1973. (*Smith v. Robinson, supra,* 468 U.S. at pp. 1016-1017 [82 L.Ed.2d at p. 768].) The Supreme [***45] Court has noted that Congress intended the act to establish "'a basic floor of opportunity that would bring into compliance all school districts with the constitutional right to equal protection with respect to handicapped children.'" (*Hendrick Hudson Dist. Bd. of Ed. v. Rowley, supra,* 458 U.S. at p. 200 [73 L.Ed.2d at p. 708] citing the House of Representatives Report.) [12]

12 Consistent with its "basic floor of opportunity" purpose, the act does not require local agencies to maximize the potential of each handicapped child commensurate with the opportunity provided nonhandicapped children. Rather, the act requires that handicapped children be accorded meaningful access to a free public education, which means access that is sufficient to confer some educational benefit. (Ibid.)

It is demonstrably manifest that in the view of Congress the substantive requirements of the 1975 amendment to the Education of the Handicapped Act were commensurate with the [***46] constitutional obligations of state and local [*1588] educational agencies. Congress found that "State and local educational agencies have a responsibility to provide education for all handicapped children, but present financial resources are inadequate to meet the special educational needs of handicapped children;" and "it is in the national interest that the Federal Government assist State and local efforts to provide programs to meet the educational needs of handicapped children in order to assure equal protection of the law." (20 U.S.C. former § 1400(b)(8) & (9).) [13]

13 That Congress intended to enforce the Fourteenth Amendment to the United States Constitution in enacting the Education of the Handicapped Act has since been made clear. In *Dellmuth v. Muth* (1989) 491 U.S. 223 at pages 231232 [105 L.Ed.2d 181, 189-191, 109 S.Ct. 2397], and the court noted that Congress has the power under section 5 of the Fourteenth Amendment to abrogate a state's Eleventh Amendment immunity from suit in federal court, but concluded that the Education of the Handicapped Act did not clearly evince such a congressional intent. In 1990 Congress responded by expressly abrogating state sovereign immunity under the act. (20 U.S.C. § 1403.)

[***47] It is also apparent that Congress intended the act to achieve nationwide application: "It is the pur-

pose of this chapter to assure that all handicapped children have available to them, within the time periods specified in section 1412(2)(B) of this title, a free appropriate public education which emphasizes special education and related services designed to meet their unique needs, to assure that the rights of handicapped children and their parents or guardians are protected, to assist States and localities to provide for the education of all handicapped children, and to assess and assure the effectiveness of efforts to educate handicapped children." (20 U.S.C. former § 1400(c).)

[**563] In order to gain state and local acceptance of its substantive provisions, the Education of the Handicapped Act employs a "cooperative federalism" scheme, which has also been referred to as the "carrot and stick" approach. (See *City of Sacramento v. State of California, supra,* 50 Cal.3d at pp. 73-74; *City of Sacramento v. State of California, supra,* 156 Cal.App.3d at p. 195.) [***48] As an incentive Congress made substantial federal financial assistance available to states and local educational agencies that would agree to adhere to the substantive and procedural terms of the act. (20 U.S.C. § 1411, 1412.) For example, the administrative record indicates that for fiscal year 1979- 1980, the base year for Santa Barbara's claim, California received $ 71.2 million in federal assistance, and during fiscal year 1980-1981, the base year for Riverside's claim, California received $ 79.7 million. We cannot say that such assistance on an ongoing basis is trivial or insubstantial.

Contrary to Riverside's argument, [HN4]federal financial assistance was not the only incentive for a state to comply with the Education of the Handicapped Act. (7) Congress intended the act to serve as a means by which state and [*1589] local educational agencies could fulfill their obligations under the equal protection and due process provisions of the Constitution and under section 504 of the Rehabilitation Act of 1973. Accordingly, where it is applicable the act supersedes claims under the Civil Rights Act (42 U.S.C. § 1983) [***49] and section 504 of the Rehabilitation Act of 1973, and the administrative remedies provided by the act constitute the exclusive remedy of handicapped children and their parents or other representatives. (*Smith v. Robinson, supra,* 468 U.S. at pp. 1009, 1013, 1019 [82 L.Ed.2d at pp. 763, 766, 769].) [14]

14 In *Smith v. Robinson, supra,* the court concluded that since the Education of the Handicapped Act did not include a provision for attorney fees, a successful complainant was not entitled to an award of such fees even though such fees would have been available in litigation under section 504 of the Rehabilitation Act of 1973 or section 1983 of the Civil Rights Act. Congress reacted by adding a provision for attorney fees to the Education of the Handicapped Act. (20 U.S.C. § 1415(e)(4)(B).)

[HN5]As a result of the exclusive nature of the Education of the Handicapped [***50] Act, dissatisfied parties in recipient states must exhaust their administrative remedies under the act before resorting to judicial intervention. (*Smith v. Robinson, supra,* 468 U.S. at p. 1011 [82 L.Ed.2d at p. 764].) This gives local agencies the first opportunity and the primary authority to determine appropriate placement and to resolve disputes. (*Ibid.*) If a party is dissatisfied with the final result of the administrative process then he or she is entitled to seek judicial review in a state or federal court. (20 U.S.C. § 1415(e)(2).) In such a proceeding the court independently reviews the evidence but its role is restricted to that of review of the local decision and the court is not free to substitute its view of sound educational policy for that of the local authority. (*Hendrick Hudson Dist. Bd. of Ed. v. Rowley, supra,* 458 U.S. at pp. 206-207 [73 L.Ed.2d at p. 712].) And since the act provides the exclusive remedy for addressing a handicapped child's right to an appropriate education, where the act applies a party [***51] cannot pursue a cause of action for constitutional violations, either directly or under the Civil Rights Act (42 U.S.C. § 1983), nor can a party proceed under section 504 of the Rehabilitation Act of 1973. (*Smith v. Robinson, supra,* 468 U.S. at pp. 1013, 1020 [82 L.Ed.2d at pp. 766, 770].)

Congress's intention to give the Education of the Handicapped Act nationwide application was successful. By the time of the decision in *Hendrick Hudson Dist. Bd. of Ed. v. Rowley, supra,* all states except New Mexico had become recipients under the act. (458 U.S. at pp. 183-184 [73 L.Ed.2d at p. 698].) It is important at this point in our discussion to consider the experience of New Mexico, both because the Board of Control relied upon that state's failure to adopt the Education [**564] of the Handicapped Act as proof that the act is not federally mandated, and because it illustrates the consequences of a failure to adopt the act. [*1590]

In *N. M. Ass'n for Retarded Citizens v. State of N. M.* (D.N.M. 1980) 495 F.Supp. 391, [***52] a class action was brought against New Mexico and its local school districts based upon the alleged failure to provide a free appropriate public education to handicapped children. The plaintiffs' causes of action asserting constitutional violations were severed and stayed pending resolution of the federal statutory causes of action. (*Id.* at p. 393.) The district court concluded that the plaintiffs could not proceed with claims under the Education of the Handicapped Act because the state had not adopted that act and, without more, that was a governmental decision within the state's power. (*Id.* at p. 394.) [15] The court then

considered the cause of action under section 504 and found that both the state and its local school districts were in violation of that section by failing to provide a free appropriate education to handicapped children within their territories. (495 F.Supp. at pp. 398-399.)

15 The plaintiffs alleged that the failure of the state to apply for federal funds under the Education of the Handicapped Act was itself an act of discrimination. The district court did not express a view on that question, leaving it for resolution in connection with the constitutional causes of action. (Ibid.)

[***53] After the district court entered an injunctive order designed to compel compliance with section 504, the matter was appealed. (*N. M. Ass'n for Retarded Citizens v. State of N. M., supra,* 678 F.2d 847.) The court of appeals rejected the defendants' arguments that the plaintiffs were required to exhaust state administrative remedies before bringing their action and that the district court should have applied the doctrine of primary jurisdiction to defer ruling until the Office of Civil Rights could complete its investigation into the charges. (*Id.* at pp. 850-851.) The court also rejected the defendants' arguments that section 504 does not require them to take action to accommodate the needs of handicapped children and that proof of disparate treatment is essential to a violation of section 504. (678 F.2d at p. 854.) The court found sufficient evidence in the record to establish discrimination against handicapped children within the meaning of section 504. (678 F.2d at p. 854.) However, the reviewing court concluded that the district court had applied an erroneous standard in reaching its decision, [***54] and the matter was remanded for further proceedings. (*Id.* at p. 855.)

On July 19, 1984, during the proceedings before the Board of Control, a representative of the Department of Education testified that New Mexico has since implemented a program of special education under the Education of the Handicapped Act. We have no doubt that after the litigation we have just recounted New Mexico saw the handwriting on the wall and realized that it could either establish a program of special education with federal financial assistance under the Education of the Handicapped Act, or be compelled through litigation to accommodate the educational needs of handicapped [*1591] children without federal assistance and at the risk of losing other forms of federal financial aid. In any event, with the capitulation of New Mexico the Education of the Handicapped Act achieved the nationwide application intended by Congress. (20 U.S.C. § 1400(c).)

California's experience with special education in the time period leading up to the adoption of the Education of the Handicapped Act is examined as a case study in Kirp et al., *Legal Reform of Special Education: Empirical* [***55] *Studies and Procedural Proposals* (1974) 62 Cal.L.Rev. 40, at pages 96 through 115. As this study reflects, during this period the state and local school districts were struggling to create a program to accommodate adequately the educational needs of the handicapped. (*Id.* at pp. 97-110.) Individuals and organized groups, such as the California Association for the Retarded and the California Association for Neurologically Handicapped Children, were exerting pressure through political and other means at every level of the educational system. (Ibid.) Litigation was becoming so prevalent [**565] that the authors noted: "Fear of litigation over classification practices, prompted by the increasing number of lawsuits, is pervasive in California." (*Id.* at p. 106, fn. 295.) [16]

16 Lawsuits primarily fell into three types: (1) Challenges to the adequacy or even lack of available programs and services to accommodate handicapped children. (*Id.* at p. 97, fns. 255, 257.) (2) Challenges to classification practices in general, such as an overtendency to classify minority or disadvantaged children as "retarded." (*Id.* at p. 98, fns. 259, 260.) (3) Challenges to individual classification decisions. (*Id.* at p. 106.) In the absence of administrative procedures for resolving classification disputes, dissatisfied parents were relegated to self-help remedies, such as pestering school authorities, or litigation. (*Ibid.*)

[***56] In the early 1970's the state Department of Education began working with local school officials and university experts to design a "California Master Plan for Special Education." (Kirp et al., *Legal Reform of Special Education: Empirical Studies and Procedural Proposals, supra,* 62 Cal.L.Rev. at p. 111.) In 1974 the Legislature enacted legislation to give the Superintendent of Public Instruction the authority to implement and administer a pilot program pursuant to a master plan adopted by State Board of Education in order to determine whether services under such a plan would better meet the needs of children with exceptional needs. (Stats. 1974, ch. 1532, § 1, p. 3441, enacting Ed. Code, § 7001.) In 1977 the Legislature acted to further implement the master plan. (Stats. 1977, ch. 1247, especially § 10, pp. 4236-4237, enacting Ed. Code, § 56301.) In 1980 the Legislature enacted urgency legislation revising our special education laws with the express intent of complying with the 1975 amendments to the Education of the Handicapped Act. (Stats. 1980, ch. 797, especially § 9, pp. 2411-2412, enacting Ed. Code, § 56000.)

As this history demonstrates, in determining whether to [***57] adopt the requirements of the Education of the Handicapped Act as amended in 1975, our [*1592]

Legislature was faced with the following circumstances: (1) In the *Serrano* litigation, our Supreme Court had declared basic education to be a fundamental right and, without even considering special education in the equation, had found our educational system to be violative of equal protection principles. (2) Judicial decisions from other jurisdictions had established that handicapped children have an equal protection right to a free public education appropriate to their needs and due process rights with regard to placement decisions. (3) Congress had enacted section 504 of the Rehabilitation Act of 1973 to codify the equal protection rights of handicapped children in any school system that receives federal financial assistance and to threaten the state and local districts with the loss of all federal funds for failure to accommodate the needs of such children. (4) Parents and organized groups representing handicapped children were becoming increasingly litigious in their efforts to secure an appropriate education for handicapped children. (5) In enacting the 1975 amendments to [***58] the Education of the Handicapped Act, Congress did not intend to require state and local educational agencies to do anything more than the Constitution already required of them. The act was intended to provide a means by which educational agencies could fulfill their constitutional responsibilities and to provide substantial federal financial assistance for states that would agree to do so.

(8a) Under these circumstances we have no doubt that enactment of the 1975 amendments to the Education of the Handicapped Act constituted a federal mandate under the criteria set forth in *City of Sacramento v. State of California, supra,* 50 Cal.3d at page 76. The remaining question is whether the state's participation in the federal program was a matter of "true choice" or was "truly voluntary." The alternatives were to participate in the federal program and obtain federal financial assistance and the procedural protections accorded by the act, or to decline to participate and face a barrage of litigation with no real defense and ultimately be compelled to accommodate the educational needs of handicapped children in any event. We conclude [***59] that so far [**566] as the state is concerned the Education of the Handicapped Act constitutes a federal mandate.

V. SUBVENTION FOR SPECIAL EDUCATION

Our conclusion that the Education of the Handicapped Act is a federal mandate with respect to the state marks the starting point rather than the end of the consideration which will be required to resolve the Santa Barbara and Riverside test claims. In *City of Sacramento v. State of California, supra,* 50 Cal.3d at pages 66 through 70, the California Supreme Court concluded that the costs at issue in that case (unemployment insurance premiums) were not subject to state subvention because they were incidental to a law of general [*1593] application rather than a new governmental program or increased level of service under an existing program. The court addressed the federal mandate issue solely with respect to the question whether the costs were exempt from the local government's taxing and spending limitations. (*Id.* at pp. 70-71.) It observed that prior authorities had assumed that if a cost was federally mandated it could not be a state mandated cost subject to subvention, and [***60] said: "We here express no view on the question whether 'federal' and 'state' mandates are mutually exclusive for purposes of state subvention, but leave that issue for another day. ..." (*Id.* at p. 71, fn. 16.) The test claims of Santa Barbara and Riverside present that question which we address here for the guidance of the Commission on remand.

(9) The constitutional subvention provision and the statutory provisions which preceded it do not expressly say that the state is not required to provide a subvention for costs imposed by a federal mandate. Rather, that conclusion follows from the plain language of the subvention provisions [HN6]themselves. The constitutional provision requires state subvention when "the Legislature or any State agency mandates a new program or higher level of service" on local agencies. (Cal. Const., art. XIII B, § 6.) Likewise, the earlier statutory provisions required subvention for new programs or higher levels of service mandated by legislative act or executive regulation. (See Rev. & Tax. Code, former § 2164.3 [Stats. 1972, ch. 1406, § 14.7, pp. 2962- 2963], 2231 [Stats. 1973, ch. 358, § 3, pp. 783-784], 2207 [Stat. 1975, ch. 486, § 1.8, pp. 997-998], 2207.5 [***61] [Stats. 1977, ch. 1135, § 5, pp. 3646-3647].) When the federal government imposes costs on local agencies those costs are not mandated by the state and thus would not require a state subvention. Instead, such costs are exempt from local agencies' taxing and spending limitations. This should be true even though the state has adopted an implementing statute or regulation pursuant to the federal mandate so long as the state had no "true choice" in the manner of implementation of the federal mandate. (See *City of Sacramento v. State of California, supra,* 50 Cal.3d at p. 76.)

This reasoning would not hold true where the manner of implementation of the federal program was left to the true discretion of the state. A central purpose of the principle of state subvention is to prevent the state from shifting the cost of government from itself to local agencies. (*City of Sacramento v. State of California, supra,* 50 Cal.3d at p. 68.) Nothing in the statutory or constitutional subvention provisions would suggest that the state is free to shift state costs to local agencies [***62] without subvention merely because those costs were imposed upon the state by the federal government. In our

view the determination whether certain costs were imposed upon a local agency by a federal mandate must focus upon the local agency which [*1594] is ultimately forced to bear the costs and how those costs came to be imposed upon that agency. If the state freely chose to impose the costs upon the local agency as a means of implementing a federal program then the costs are the result of a reimbursable state mandate regardless whether the costs were imposed [**567] upon the state by the federal government.

The Education of the Handicapped Act is a comprehensive measure designed to provide all handicapped children with basic educational opportunities. While the act includes certain substantive and procedural requirements which must be included in a state's plan for implementation of the act, it leaves primary responsibility for implementation to the state. (20 U.S.C. § 1412, 1413.) **(8b)** In short, even though the state had no real choice in deciding whether to comply with the federal act, the act did not necessarily require the state to impose all of [***63] the costs of implementation upon local school districts. To the extent the state implemented the act by freely choosing to impose new programs or higher levels of service upon local school districts, the costs of such programs or higher levels of service are state mandated and subject to subvention.

We can illustrate this point with a hypothetical situation. Subvention principles are intended to prevent the state from shifting the cost of state governmental services to local agencies and thus subvention is required where the state imposes the cost of such services upon local agencies even if the state continues to perform the services. (*Lucia Mar Unified School Dist. v. Honig, supra,* 44 Cal.3d at pp. 835-836.) The Education of the Handicapped Act requires the state to provide an impartial, state-level review of the administrative decisions of local or intermediate educational agencies. (20 U.S.C. § 1415(c), (d).) Obviously, the state could not shift the actual performance of these new administrative reviews to local districts, but it could attempt to shift the costs to local districts [***64] by requiring local districts to pay the expenses of reviews in which they are involved. An attempt to do so would trigger subvention requirements. In such a hypothetical case, the state could not avoid its subvention responsibility by pleading "federal mandate" because the federal statute does not require the state to impose the costs of such hearings upon local agencies. Thus, as far as the local agency is concerned, the burden is imposed by a state rather than a federal mandate.

In the administrative proceedings the Board of Control did not address the "federal mandate" question under the appropriate standard and with proper focus on local school districts. In its initial determination the board concluded that the Education of the Handicapped Act constituted a federal mandate and that the state-imposed costs on local school districts in excess of the federally imposed costs. However, the board did not consider the [*1595] extent of the state-mandated costs because it concluded that any appropriation by the state satisfied its obligation. On Riverside's petition for a writ of administrative mandate the superior court remanded to the Board of Control to consider whether [***65] the state appropriation was sufficient to reimburse local school districts fully for the state-mandated costs. On remand the board clearly applied the now-discredited criteria set forth in this court's decision in *City of Sacramento v. State of California, supra,* 156 Cal.App.3d 182, and concluded that the Education of the Handicapped Act is not a federal mandate at any level of government. Under these circumstances we agree with the trial court that the matter must be remanded to the Commission for consideration in light of the criteria set forth in the Supreme Court's *City of Sacramento* decision. We add that on remand the Commission must focus upon the costs incurred by local school districts and whether those costs were imposed *on local districts* by federal mandate or by the state's voluntary choice in its implementation of the federal program.

VI. RIVERSIDE'S OBJECTIONS

In light of this discussion we may now consider Riverside's objections to the trial court's decision to remand the matter to the Commission for reconsideration.

Riverside asserts that the California Supreme Court opinion in *City of Sacramento* is not [***66] on point because the court did not address the federal mandate question with respect to state subvention principles. Riverside implies that the definition of a federal mandate may be different [**568] with respect to state subvention than with respect to taxing and spending limitations. [HN7] **(10)** As a general rule and unless the context clearly requires otherwise, we must assume that the meaning of a term or phrase is consistent throughout the entire act or constitutional article of which it is a part. (*Lungren v. Davis* (1991) 234 Cal.App.3d 806, 823 [285 Cal.Rptr. 777].) **(11)** Subvention principles are part of a more comprehensive political scheme. The basic purpose of the scheme as a whole was to limit the taxing and spending powers of government. The taxing and spending powers of local agencies were to be "frozen" at existing levels with adjustments only for inflation and population growth. Since local agencies are subject to having costs imposed upon them by other governmental entities, the scheme provides relief in that event. If the costs are imposed by the federal government or the courts, then the costs are not included in the local government's [***67] taxing and spending limitations. If the costs are imposed by the state then the state must provide a sub-

vention to reimburse the local agency. Nothing in this scheme suggests that the concept of a federal mandate should have different meanings depending upon whether one is considering subvention or taxing and spending limitations. Accordingly, we reject the claim that the criteria set forth in [*1596] the Supreme Court's *City of Sacramento* decision do not apply when subvention is the issue.

(12) Riverside asserts that the trial court erred in concluding that the Board of Control did not consider the issues under the appropriate criteria and that the board did in fact consider the factors set forth in the Supreme Court's *City of Sacramento* decision. From our discussion above it is clear that we must reject these assertions. In its decision the board relied upon the "cooperative federalism" nature of the Education of the Handicapped Act without any consideration whether the act left the state any actual choice in the matter. In support of its conclusion the board relied upon the New Mexico litigation which we have also discussed. However, as we have pointed out, under [***68] the criteria set forth in the Supreme Court's *City of Sacramento* decision, the New Mexico litigation does not support the board's decision but in fact strongly supports a contrary result. We are satisfied that the trial court correctly concluded that the board did not apply the appropriate criteria in reaching its decision.

Riverside asserts that the Supreme Court's *City of Sacramento* decision elucidated and enforced prior law and thus no question of retroactivity arises. (See *Donaldson v. Superior Court* (1983) 35 Cal.3d 24, 37 [196 Cal.Rptr. 704, 672 P.2d 110].) **(13)** We agree that in *City of Sacramento* the Supreme Court elucidated and enforced existing law. Under such circumstances the rule of retrospective operation controls. (See also *Wellenkamp v. Bank of America* (1978) 21 Cal.3d 943, 953-954 [148 Cal.Rptr. 379, 582 P.2d 970]; *County of Los Angeles v. Faus* (1957) 48 Cal.2d 672, 680-681 [312 P.2d 680].) Pursuant to that rule the trial court correctly applied the *City of Sacramento* decision to the [***69] litigation pending before it. As we have seen, that decision supports the trial court's determination to remand the matter to the Commission for reconsideration.

Riverside asserts that if further consideration under the criteria of the Supreme Court's *City of Sacramento* decision is necessary then the trial court should have, and this court must, engage in such consideration to reach a final conclusion on the question. To a limited extent we agree. In our previous discussion we have concluded that under the criteria set forth in *City of Sacramento,* the Education of the Handicapped Act constitutes a federal mandate as far as the state is concerned. We are satisfied that is the only conclusion which may be drawn and we so hold as a matter of law. However, that conclusion does not resolve the question whether new special education costs were imposed upon local school districts by federal mandate or by state choice in the implementation of the federal program. The issues were not addressed by the parties or the Board of Control in this light. The [*1597] Commission on State Mandates is the entity with the responsibility for considering the issues in [**569] the first instance [***70] and which has the expertise to do so. We agree with the trial court that it is appropriate to remand the matter to the Commission for reconsideration in light of the appropriate criteria which we have set forth in this appeal.

In view of the result we have reached we need not and do not consider whether it would be appropriate otherwise to fashion some judicial remedy to avoid the rule, based upon the separation of powers doctrine, that a court cannot compel the State Controller to make a disbursement in the absence of an appropriation. (See *Carmel Valley Fire Protection Dist. v. State of California, supra,* 190 Cal.App.3d at pp. 538-541.)

DISPOSITION

The judgment is affirmed.

Davis, J., and Scotland, J., concurred. The petition of plaintiff and respondent for review by the Supreme Court was denied April 1, 1993. Lucas, C.J., Kennard, J., and Arabian, J., were of the opinion that the petition should be granted.

TAB "16"

1 of 1 DOCUMENT

FRANCES KINLAW et al., Plaintiffs and Appellants, v. THE STATE OF CALIFORNIA et al., Defendants and Respondents

No. S014349

Supreme Court of California

54 Cal. 3d 326*; *814 P.2d 1308*; *285 Cal. Rptr. 66*; *1991 Cal. LEXIS 3745*; *91 Cal. Daily Op. Service 7086*; *91 Daily Journal DAR 10744

August 30, 1991

PRIOR HISTORY: Superior Court of Alameda County, No. 632120-4, Henry Ramsey, Jr., and Demetrios P. Agretelis, Judges.

DISPOSITION: The judgment of the Court of Appeal is reversed.

SUMMARY:

CALIFORNIA OFFICIAL REPORTS SUMMARY

Medically indigent adults and taxpayers brought an action pursuant to *Code Civ. Proc., § 526a*, against the state, alleging that it had violated *Cal. Const., art. XIII B, § 6* (reimbursement of local governments for state-mandated new programs), by shifting its financial responsibility for the funding of health care for the poor onto the county without providing the necessary funding, and that as a result the state had evaded its constitutionally mandated spending limits. The trial court granted summary judgment for the State after concluding plaintiffs lacked standing to prosecute the action. (Superior Court of Alameda County, No. 632120-4, Henry Ramsey, Jr., and Demetrios P. Agretelis, Judges.) The Court of Appeal, First Dist., Div. Two, Nos. A041426 and A043500, reversed.

The Supreme Court reversed the judgment of the Court of Appeal, holding the administrative procedures established by the Legislature (*Gov. Code, § 17500 et seq.*), which are available only to local agencies and school districts directly affected by a state mandate, were the exclusive means by which the state's obligations under *Cal. Const., art. XIII B, § 6*, were to be determined and enforced. Accordingly, the court held plaintiffs lacked standing to prosecute the action. (Opinion by Baxter, J., with Lucas, C. J., Panelli, Kennard, and Arabian, JJ., concurring. Separate dissenting opinion by Broussard, J., with Mosk, J., concurring.)

HEADNOTES

CALIFORNIA OFFICIAL REPORTS HEADNOTES

Classified to California Digest of Official Reports, 3d Series

(1) State of California § 7--Actions--State-mandated Costs--Reimbursement--Exclusive Statutory Remedy. -- *Gov. Code, § 17500 et seq.*, creates an administrative forum for resolution of state mandate claims arising under *Cal. Const., art. XIII B, § 6*, and establishes procedures which exist for the express purpose of avoiding multiple proceedings, judicial and administrative, addressing the same claim that a reimbursable state mandate has been created. The statutory scheme also designates the Sacramento County Superior Court as the venue for judicial actions to declare unfunded mandates invalid. In view of the comprehensive nature of the legislative scheme, and from the expressed intent, the Legislature has created what is clearly intended to be a comprehensive and exclusive procedure by which to implement and enforce *Cal. Const., art. XIII B, § 6*.

(2) State of California § 7--Actions--State-mandated Costs--Reimbursement--Private Action to Enforce--Standing. --In an action by medically indigent adults and taxpayers seeking to enforce *Cal. Const., art.*

XIII B, § 6, for declaratory and injunctive relief requiring the state to reimburse the county for the cost of providing health care services to medically indigent adults who, prior to 1983, had been included in the state Medi-Cal program, the Court of Appeal erred in holding that the existence of an administrative remedy (*Gov. Code, § 17500 et seq.*) by which affected local agencies could enforce their constitutional right under art. XIII B, § 6 to reimbursement for the cost of state mandates did not bar the action. Because the right involved was given by the Constitution to local agencies and school districts, not individuals either as taxpayers or recipients of government benefits and services, the administrative remedy was adequate to fully implement the constitutional provision. The Legislature has the authority to establish procedures for the implementation of local agency rights under art. XIII B, § 6; unless the exercise of a constitutional right is unduly restricted, a court must limit enforcement to the procedures established by the Legislature. Plaintiffs' interest, although pressing, was indirect and did not differ from the interest of the public at large in the financial plight of local government. Relief by way of reinstatement to Medi-Cal pending further action by the state was not a remedy available under the statute, and thus was not one which a court may award.

[See 7 **Witkin,** Summary of Cal. Law (9th ed. 1988) Constitutional Law, § 112.]

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John K. Van de Kamp and Daniel E. Lungren, Attorneys General, N. Eugene Hill, Assistant Attorney General, Richard M. Frank, Asher Rubin and Carol Hunter, Deputy Attorneys General, for Defendants and Respondents.

JUDGES: Opinion by Baxter, J., with Lucas, C. J., Panelli, Kennard, and Arabian, JJ., concurring. Separate dissenting opinion by Broussard, J., with Mosk, J., concurring.

OPINION BY: BAXTER

OPINION

[*328] **[**1309]** **[***67]** Plaintiffs, medically indigent adults and taxpayers, seek to enforce section 6 of article XIII B (hereafter, section 6) of the California Constitution through an action for declaratory and injunctive relief. They invoked the jurisdiction of the superior court as taxpayers pursuant to *Code of Civil Procedure section 526a* and as persons affected by the alleged failure of the state to comply with section 6. The superior court granted summary judgment for defendants State of California and Director of the Department of Health Services, after concluding that plaintiffs lacked standing to prosecute the action. On appeal, the Court of Appeal held that plaintiffs have standing and that the action is not barred by the availability of administrative remedies.

[1310]** **[***68]** We reverse. The administrative procedures established by the Legislature, which are available only to local agencies and school districts directly affected by a state mandate, are the exclusive means by which the state's obligations under section 6 are to be determined and enforced. Plaintiffs therefore lack standing.

I

State Mandates

Section 6, adopted on November 6, 1979, as part of an initiative measure imposing spending limits on state and local government, also imposes on the state an obligation to reimburse local agencies for the cost of most programs and services which they must provide pursuant to a state mandate if the local agencies were not under a preexisting duty to fund the activity. It provides:

[*329] "Whenever the Legislature or any state agency mandates a new program or higher level of service on any local government, the state shall provide a subvention of funds to reimburse such local government for the costs of such program or increased level of service, except that the Legislature may, but need not, provide such subvention of funds for the following mandates:

"(a) Legislative mandates requested by the local agency affected;

"(b) Legislation defining a new crime or changing an existing definition of a crime; or

"(c) Legislative mandates enacted prior to January 1, 1975, or executive orders or regulations initially implementing legislation enacted prior to January 1, 1975."

A complementary provision, section 3 of article XIII B, provides for a shift from the state to the local agency of a portion of the spending or "appropriation" limit of the state when responsibility for funding an activity is shifted to a local agency:

"The appropriations limit for any fiscal year . . . shall be adjusted as follows: [para.] (a) In the event that the financial responsibility of providing services is transferred, in whole or in part, . . . from one entity of government to another, then for the year in which such transfer becomes effective the appropriations limit of the transferee entity shall be increased by such reasonable amount as the said entities shall mutually agree and the appropriations limit of the transferor entity shall be decreased by the same amount."

II

Plaintiffs' Action

The underlying issue in this action is whether the state is obligated to reimburse the County of Alameda, and shift to Alameda County a concomitant portion of the state's spending limit, for the cost of providing health care services to medically indigent adults who prior to 1983 had been included in the state Medi-Cal program. Assembly Bill No. 799 (1981-1982 Reg. Sess.) (AB 799) (Stats. 1982, ch. 328, p. 1568) removed medically indigent adults from Medi-Cal effective January 1, 1983. At the time section 6 was adopted, the state was funding Medi-Cal coverage for these persons without requiring any county financial contribution.

Plaintiffs initiated this action in the Alameda County Superior Court. They sought relief on their own behalf and on behalf of a class of similarly **[*330]** situated medically indigent adult residents of Alameda County. The only named defendants were the State of California, the Director of the Department of Health Services, and the County of Alameda.

In the complaint for declaratory and injunctive relief, plaintiffs sought an injunction compelling the state to restore Medi-Cal eligibility to medically indigent adults or to reimburse the County of Alameda for the cost of providing health care to those persons. They also prayed for a declaration that the transfer of responsibility from the state-financed Medi-Cal program to the counties without adequate reimbursement violated the California Constitution. [1]

1 The complaint also sought a declaration that the county was obliged to provide health care services to indigents that were equivalent to those available to nonindigents. This issue is not before us. The County of Alameda aligned itself with plaintiffs in the superior court and did not oppose plaintiffs' effort to enforce section 6.

[1311]** **[***69]** At the time plaintiffs initiated their action neither Alameda County, nor any other county or local agency, had filed a reimbursement claim with the Commission on State Mandates (Commission). [2]

2 On November 23, 1987, the County of Los Angeles filed a test claim with the Commission. San Bernardino County joined as a test claimant. The Commission ruled against the counties, concluding that no state mandate had been created. The Los Angeles County Superior Court subsequently granted the counties' petition for writ of mandate (*Code Civ. Proc., § 1094.5*), reversing the Commission, on April 27, 1989. (No. C-731033.) An appeal from that judgment is presently pending in the Court of Appeal. (*County of Los Angeles* v. *State of California*, No. B049625.)

Whether viewed as an action seeking restoration of Medi-Cal benefits, one to compel state reimbursement of county costs, or one for declaratory relief, therefore, the action required a determination that the enactment of AB 799 created a state mandate within the contemplation of section 6. Only upon resolution of that issue favorably to plaintiffs would the state have an obligation to reimburse the county for its increased expense and shift a portion of its appropriation limit, or to reinstate Medi-Cal benefits for plaintiffs and the class they seek to represent.

The gravamen of the action is, therefore, enforcement of section 6. [3]

3 Plaintiffs argue that they seek only a declaration that AB 799 created a state mandate and an injunction against the shift of costs until the state decides what action to take. This is inconsistent with the prayer of their complaint which sought an injunction requiring defendants to restore Medi-Cal eligibility to all medically indigent adults until the state paid the cost of full health services for them. It is also unavailing.

An injunction against enforcement of a state mandate is available only after the Legislature fails to include funding in a local government claims bill following a determination by the Commission that a state mandate exists. (*Gov. Code, § 17612.*) Whether plaintiffs seek declaratory relief and/or an injunction, therefore, they are seeking to enforce section 6.

All further statutory references are to the Government Code unless otherwise indicated.

[*331] III

Enforcement of Article XIII B, Section 6

In 1984, almost five years after the adoption of article XIII B, the Legislature enacted comprehensive ad-

ministrative procedures for resolution of claims arising out of section 6. (*§ 17500.*) The Legislature did so because the absence of a uniform procedure had resulted in inconsistent rulings on the existence of state mandates, unnecessary litigation, reimbursement delays, and, apparently, resultant uncertainties in accommodating reimbursement requirements in the budgetary process. The necessity for the legislation was explained in *section 17500*:

"The Legislature finds and declares that the existing system for reimbursing local agencies and school districts for the costs of state-mandated local programs has not provided for the effective determination of the state's responsibilities under *Section 6 of Article XIII B of the California Constitution.* The Legislature finds and declares that the failure of the existing process to adequately and consistently resolve the complex legal questions involved in the determination of state-mandated costs has led to an increasing reliance by local agencies and school districts on the judiciary and, therefore, in order to relieve unnecessary congestion of the judicial system, *it is necessary to create a mechanism which is capable of rendering sound quasi-judicial decisions and providing an effective means of resolving disputes over the existence of state-mandated local programs.*" (Italics added.)

In part 7 of division 4 of title 2 of the Government Code, "State-Mandated Costs," which commences with *section 17500*, the Legislature created the Commission (*§ 17525*), to adjudicate disputes over the existence of a state mandated program (*§§ 17551, 17557*) and to adopt procedures for submission and adjudication of reimbursement claims (*§ 17553*). The five-member Commission includes the Controller, the Treasurer, the Director of Finance, the Director of the Office of Planning and **[**1312]** **[***70]** Research, and a public member experienced in public finance. (*§ 17525.*)

The legislation establishes a test-claim procedure to expeditiously resolve disputes affecting multiple agencies (*§ 17554*), [4] establishes the method of **[*332]** payment of claims (*§§ 17558, 17561*), and creates reporting procedures which enable the Legislature to budget adequate funds to meet the expense of state mandates (*§§ 17562, 17600, 17612, subd. (a).*)

4 The test claim by the County of Los Angeles was filed prior to that proposed by Alameda County. The Alameda County claim was rejected for that reason. (See *§ 17521.*) Los Angeles County permitted San Bernardino County to join in its claim which the Commission accepted as a test claim intended to resolve the issues the majority elects to address instead in this proceeding. Los Angeles County declined a request from Alameda County that it be included in the test claim because the two counties' systems of documentation were so similar that joining Alameda County would not be of any benefit. Alameda County and these plaintiffs were, of course, free to participate in the Commission hearing on the test claim. (*§ 17555.*)

Pursuant to procedures which the Commission was authorized to establish (*§ 17553*), local agencies [5] and school districts [6] are to file claims for reimbursement of state-mandated costs with the Commission (*§§ 17551, 17560*), and reimbursement is to be provided only through this statutory procedure. (*§§ 17550, 17552.*)

5 "'Local agency' means any city, county, special district, authority, or other political subdivision of the state." (*§ 17518.*)

6 "'School district' means any school district, community college district, or county superintendant of schools." (*§ 17519.*)

The first reimbursement claim filed which alleges that a state mandate has been created under a statute or executive order is treated as a "test claim." (*§ 17521.*) A public hearing must be held promptly on any test claim. At the hearing on a test claim or on any other reimbursement claim, evidence may be presented not only by the claimant, but also by the Department of Finance and any other department or agency potentially affected by the claim. (*§ 17553.*) Any interested organization or individual may participate in the hearing. (*§ 17555.*)

A local agency filing a test claim need not first expend sums to comply with the alleged state mandate, but may base its claim on estimated costs. (*§ 17555.*) The Commission must determine both whether a state mandate exists and, if so, the amount to be reimbursed to local agencies and school districts, adopting "parameters and guidelines" for reimbursement of any claims relating to that statute or executive order. (*§ 17557.*) Procedures for determining whether local agencies have achieved statutorily authorized cost savings and for offsetting these savings against reimbursements are also provided. (*§ 17620 et seq.*) Finally, judicial review of the Commission decision is available through petition for writ of mandate filed pursuant to *Code of Civil Procedure section 1094.5.* (*§ 17559.*)

The legislative scheme is not limited to establishing the claims procedure, however. It also contemplates reporting to the Legislature and to departments and agencies of the state which have responsibilities related to funding state mandates, budget planning, and payment. The parameters and guidelines adopted by the Commission must be submitted to the Controller, who is to pay subsequent claims arising out of the mandate. (*§ 17558.*) Executive orders mandating costs are to be ac-

companied by an appropriations [*333] bill to cover the costs if the costs are not included in the budget bill, and in subsequent years the costs must be included in the budget bill. (*§ 17561, subds. (a) & (b).*) Regular review of the costs is to be made by the Legislative Analyst, who must report to the Legislature and recommend whether the mandate should be continued. (*§ 17562.*) The Commission is also required to make semiannual reports to the Legislature of the number of mandates found and the estimated reimbursement cost to the state. (*§ 17600.*) The Legislature must then adopt a "local government claims bill." If that bill does not include funding for a state mandate, an affected local agency or school district may seek a declaration from the superior court for the County of Sacramento that the mandate is unenforceable, [**1313] [***71] and an injunction against enforcement. (*§ 17612.*)

Additional procedures, enacted in 1985, create a system of state-mandate apportionments to fund reimbursement. (*§ 17615 et seq.*)

(1) It is apparent from the comprehensive nature of this legislative scheme, and from the Legislature's expressed intent, that the exclusive remedy for a claimed violation of section 6 lies in these procedures. The statutes create an administrative forum for resolution of state mandate claims, and establishes procedures which exist for the express purpose of avoiding multiple proceedings, judicial and administrative, addressing the same claim that a reimbursable state mandate has been created. The statutory scheme also designates the Sacramento County Superior Court as the venue for judicial actions to declare unfunded mandates invalid (*§ 17612*).

The legislative intent is clearly stated in *section 17500*: "It is the intent of the Legislature in enacting this part to provide for the implementation of *Section 6 of Article XIII B of the California Constitution* and to consolidate the procedures for reimbursement of statutes specified in the Revenue and Taxation Code with those identified in the Constitution. . . ." And *section 17550* states: "Reimbursement of local agencies and school districts for costs mandated by the state shall be provided pursuant to this chapter."

Finally, *section 17552* provides: "This chapter shall provide *the sole and exclusive procedure* by which a local agency or school district may claim reimbursement for costs mandated by the state as required by *Section 6 of Article XIII B of the California Constitution.*" (Italics added.)

In short, the Legislature has created what is clearly intended to be a comprehensive and exclusive procedure by which to implement and enforce section 6.

[*334] IV

Exclusivity

(2) Plaintiffs argued, and the Court of Appeal agreed, that the existence of an administrative remedy by which affected local agencies could enforce their right under section 6 to reimbursement for the cost of state mandates did not bar this action because the administrative remedy is available only to local agencies and school districts.

The Court of Appeal recognized that the decision of the County of Alameda, which had not filed a claim for reimbursement at the time the complaint was filed, was a discretionary decision which plaintiffs could not challenge. (*Dunn v. Long Beach L. & W. Co. (1896) 114 Cal. 605, 609, 610-611 [46 P. 607]*; *Silver v. Watson (1972) 26 Cal.App.3d 905, 909 [103 Cal.Rptr. 576]*; *Whitson v. City of Long Beach (1962) 200 Cal.App.2d 486, 506 [19 Cal.Rptr. 668]*; *Elliott v. Superior Court (1960) 180 Cal.App.2d 894, 897 [5 Cal.Rptr. 116].*) The court concluded, however, that public policy and practical necessity required that plaintiffs have a remedy for enforcement of section 6 independent of the statutory procedure.

The right involved, however, is a right given by the Constitution to local agencies, not individuals either as taxpayers or recipients of government benefits and services. Section 6 provides that the "state shall provide a subvention of funds *to reimburse . . . local governments* . . . ." (Italics added.) The administrative remedy created by the Legislature is adequate to fully implement section 6. That Alameda County did not file a reimbursement claim does not establish that the enforcement remedy is inadequate. Any of the 58 counties was free to file a claim, and other counties did so. The test claim is now before the Court of Appeal. The administrative procedure has operated as intended.

The Legislature has the authority to establish procedures for the implementation of local agency rights under section 6. Unless the exercise of a constitutional right is unduly restricted, the court must limit enforcement to the procedures established by the Legislature. (*People v.* [**1314] [***72] *Western Air Lines, Inc. (1954) 42 Cal.2d 621, 637 [268 P.2d 723]*; *Chesney v. Byram (1940) 15 Cal.2d 460, 463 [101 P.2d 1106]*; *County of Contra Costa v. State of California (1986) 177 Cal.App.3d 62, 75 [222 Cal.Rptr. 750].*)

Plaintiffs' argument that they must be permitted to enforce section 6 as individuals because their right to adequate health care services has been compromised by the failure of the state to reimburse the county for the cost [*335] of services to medically indigent adults is unpersuasive. Plaintiffs' interest, although pressing, is indirect and does not differ from the interest of the public at large in the financial plight of local government. Al-

though the basis for the claim that the state must reimburse the county for its costs of providing the care that was formerly available to plaintiffs under Medi-Cal is that AB 799 created a state mandate, plaintiffs have no right to have any reimbursement expended for health care services of any kind. Nothing in article XIII B or other provision of law controls the county's expenditure of the funds plaintiffs claim must be paid to the county. To the contrary, *section 17563* gives the local agency complete discretion in the expenditure of funds received pursuant to section 6, providing: "Any funds received by a local agency or school district pursuant to the provisions of this chapter may be used for any public purpose."

The relief plaintiffs seek in their prayer for state reimbursement of county expenses is, in the end, a reallocation of general revenues between the state and the county. Neither public policy nor practical necessity compels creation of a judicial remedy by which individuals may enforce the right of the county to such revenues. The Legislature has established a procedure by which the county may claim any revenues to which it believes it is entitled under section 6. That test-claim statute expressly provides that not only the claimant, but also "any other interested organization or individual may participate" in the hearing before the Commission (*§ 17555*) at which the right to reimbursement of the costs of such mandate is to be determined. Procedures for receiving any claims must "provide for presentation of evidence by the claimant, the Department of Finance and any other affected department or agency, *and any other interested person.*" (*§ 17553.* Italics added.) Neither the county nor an interested individual is without an opportunity to be heard on these questions. These procedures are both adequate and exclusive. [7]

> 7 Plaintiffs' argument, that the Legislature's failure to make provision for individual enforcement of section 6 before the Commission demonstrates an intent to permit legal actions, is not persuasive. The legislative statement of intent to relegate all mandate disputes to the Commission is clear. A more likely explanation of the failure to provide for test cases to be initiated by individuals lies in recognition that (1) because section 6 creates rights only in governmental entities, individuals lack sufficient beneficial interest in either the receipt or expenditure of reimbursement funds to accord them standing; and (2) the number of local agencies having a direct interest in obtaining reimbursement is large enough to ensure that citizen interests will be adequately represented.

The alternative relief plaintiffs seek -- reinstatement to Medi-Cal pending further action by the state -- is not a remedy available under the statute, and thus is not one which this court may award. The remedy for the failure to fund a program is a declaration that the mandate is unenforceable. That relief is available only after the Commission has determined that a mandate exists **[*336]** and the Legislature has failed to include the cost in a local government claims bill, and only on petition by the county. (*§ 17612.*) [8]

> 8 Plaintiffs are not without a remedy if the county fails to provide adequate health care, however. They may enforce the obligation imposed on the county by *Welfare and Institutions Code sections 17000* and *17001*, and by judicial action. (See, e.g., *Mooney v. Pickett (1971) 4 Cal.3d 669 [94 Cal.Rptr. 279, 483 P.2d 1231].*)

Moreover, the judicial remedy approved by the Court of Appeal permits resolution of the issues raised in a state mandate claim without the participation of those officers and individuals the Legislature deems necessary to a full and fair exposition and resolution of the issues. Neither the Controller nor the Director of Finance **[**1315]** **[***73]** was named a defendant in this action. The Treasurer and the Director of the Office of Planning and Research did not participate. All of these officers would have been involved in determining the question as members of the Commission, as would the public member of the Commission. The judicial procedures were not equivalent to the public hearing required on test claims before the Commission by *section 17555*. Therefore, other affected departments, organizations, and individuals had no opportunity to be heard. [9]

> 9 For this reason, it would be inappropriate to address the merits of plaintiff's claim in this proceeding. (Cf. *Dix v. Superior Court (1991) 53 Cal.3d 442 [279 Cal.Rptr. 834, 807 P.2d 1063].*) Unlike the dissent, we do not assume that in representing the state in this proceeding, the Attorney General necessarily represented the interests and views of these officials.

Finally, since a determination that a state mandate has been created in a judicial proceeding rather than one before the Commission does not trigger the procedures for creating parameters and guidelines for payment of claims, or for inclusion of estimated costs in the state budget, there is no source of funds available for compliance with the judicial decision other than the appropriations for the Department of Health Services. Payment from those funds can only be at the expense of another program which the department is obligated to fund. No public policy supports, let alone requires, this result.

The superior court acted properly in dismissing this action.

The judgment of the Court of Appeal is reversed.

DISSENT BY: BROUSSARD

DISSENT

ROUSSARD, J.

I dissent. For nine years the Legislature has defied the mandate of article XIII B of the California Constitution (hereafter article XIII B). Having transferred responsibility for the care of medically indigent adults (MIA's) to county governments, the Legislature has failed to provide the counties with sufficient money to meet this responsibility, yet the **[*337]** Legislature computes its own appropriations limit as if it fully funded the program. The majority, however, declines to remedy this violation because, it says, the persons most directly harmed by the violation -- the medically indigent who are denied adequate health care -- have no standing to raise the matter. I disagree, and will demonstrate that (1) plaintiffs have standing as citizens to seek a declaratory judgment to determine whether the state is complying with its constitutional duty under article XIII B; (2) the creation of an administrative remedy whereby counties and local districts can enforce article XIII B does not deprive the citizenry of its own independent right to enforce that provision; and (3) even if plaintiffs lacked standing, our recent decision in *Dix v. Superior Court (1991) 53 Cal.3d 442 [279 Cal.Rptr. 834, 807 P.2d 1063]* permits us to reach and resolve any significant issue decided by the Court of Appeal and fully briefed and argued here. I conclude that we should reach the merits of the appeal.

On the merits, I conclude that the state has not complied with its constitutional obligation under article XIII B. To prevent the state from avoiding the spending limits imposed by article XIII B, section 6 of that article prohibits the state from transferring previously state-financed programs to local governments without providing sufficient funds to meet those burdens. In 1982, however, the state excluded the medically indigent from its Medi-Cal program, thus shifting the responsibility for such care to the counties. Subvention funds provided by the state were inadequate to reimburse the counties for this responsibility, and became less adequate every year. At the same time, the state continued to compute its spending limit as if it fully financed the entire program. The result is exactly what article XIII B was intended to prevent: the state enjoys a falsely inflated spending limit; the county is compelled to assume a burden it cannot afford; and the medically indigent receive inadequate health care.

I. Facts and Procedural History

Plaintiffs -- citizens, taxpayers, and persons in need of medical care -- allege that **[**1316]** **[***74]** the state has shifted its financial responsibility for the funding of health care for MIA's to the counties without providing the necessary funding and without any agreement transferring appropriation limits, and that as a result the state is violating article XIII B. Plaintiffs further allege they and the class they claim to represent cannot, consequently, obtain adequate health care from the County of Alameda, which lacks the state funding to provide it. The county, although nominally a defendant, aligned **[*338]** itself with plaintiffs. It admits the inadequacy of its program to provide medical care for MIA's but blames the absence of state subvention funds. [1]

> 1 The majority states that "Plaintiffs are not without a remedy if the county fails to provide adequate health care . . . . They may enforce the obligation imposed on the county by *Welfare and Institutions Code sections 17000* and *17001*, and by judicial action." (Maj. opn., *ante*, p. 336, fn. 8)
>
> The majority fails to note that plaintiffs have already tried this remedy, and met with the response that, owing to the state's inadequate subvention funds, the county cannot afford to provide adequate health care.

At hearings below, plaintiffs presented uncontradicted evidence regarding the enormous impact of these statutory changes upon the finances and population of Alameda County. That county now spends about $ 40 million annually on health care for MIA's, of which the state reimburses about half. Thus, since article XIII B became effective, Alameda County's obligation for the health care of MIA's has risen from zero to more than $ 20 million per year. The county has inadequate funds to discharge its new obligation for the health care of MIA's; as a result, according to the Court of Appeal, uncontested evidence from medical experts presented below shows that, "The delivery of health care to the indigent in Alameda County is in a state of shambles; the crisis cannot be overstated . . . ." "Because of inadequate state funding, some Alameda County residents are dying, and many others are suffering serious diseases and disabilities, because they cannot obtain adequate access to the medical care they need . . . ." "The system is clogged to the breaking point. . . . All community clinics . . . are turning away patients." "The funding received by the county from the state for MIAs does not approach the actual cost of providing health care to the MIAs. As a consequence, inadequate resources available to county health services jeopardize the lives and health of thousands of people . . . ."

The trial court acknowledged that plaintiffs had shown irreparable injury, but denied their request for a preliminary injunction on the ground that they could not prevail in the action. It then granted the state's motion for summary judgment. Plaintiffs appealed from both decisions of the trial court.

The Court of Appeal consolidated the two appeals and reversed the rulings below. It concluded that plaintiffs had standing to bring this action to enforce the constitutional spending limit of article XIII B, and that the action is not barred by the existence of administrative remedies available to counties. It then held that the shift of a portion of the cost of medical indigent care by the state to Alameda County constituted a state-mandated new program under the provisions of article XIII B, which triggered that article's provisions requiring a subvention of funds by the state to reimburse Alameda **[*339]** County for the costs of such program it was required to assume. The judgments denying a preliminary injunction and granting summary judgment for defendants were reversed. We granted review.

II. Standing

A. *Plaintiffs have standing to bring an action for declaratory relief to determine whether the state is complying with article XIII B.*

Plaintiffs first claim standing as taxpayers under *Code of Civil Procedure section 526a*, which provides that: "An action to obtain a judgment, restraining and preventing any illegal expenditure of, waste of, or injury to, the estate, funds, or other property of a county . . . , may be maintained **[**1317]** **[***75]** against any officer thereof, or any agent, or other person, acting in its behalf, either by a citizen resident therein, or by a corporation, who is assessed for and is liable to pay, or, within one year before the commencement of the action, has paid, a tax therein. . . ." As in *Common Cause v. Board of Supervisors (1989) 49 Cal.3d 432, 439 [261 Cal.Rptr. 574, 777 P.2d 610]*, however, it is "unnecessary to reach the question whether plaintiffs have standing to seek an injunction under *Code of Civil Procedure section 526a*, because there is an independent basis for permitting them to proceed." Plaintiffs here seek a declaratory judgment that the transfer of responsibility for MIA's from the state to the counties without adequate reimbursement violates article XIII B. A declaratory judgment that the state has breached its duty is essentially equivalent to an action in mandate to compel the state to perform its duty. (See *California Assn. of Psychology Providers v. Rank (1990) 51 Cal.3d 1, 9 [270 Cal.Rptr. 796, 793 P.2d 2]*, which said that a declaratory judgment establishing that the state has a duty to act provides relief equivalent to mandamus, and makes issuance of the writ unnecessary.) Plaintiffs further seek a mandatory injunction requiring that the state pay the health costs of MIA's under the Medi-Cal program until the state meets its obligations under article XIII B. The majority similarly characterize plaintiffs' action as one comparable to mandamus brought to enforce section 6 of article XIII B.

We should therefore look for guidance to cases that discuss the standing of a party seeking a writ of mandate to compel a public official to perform his or her duty. [2] Such an action may be brought by any person "beneficially interested" in the issuance of the writ. (*Code Civ. Proc., § 1086.*) In *Carsten* **[*340]** *v. Psychology Examining Com. (1980) 27 Cal.3d 793, 796 [166 Cal.Rptr. 844, 614 P.2d 276]*, we explained that the "requirement that a petitioner be 'beneficially interested' has been generally interpreted to mean that one may obtain the writ only if the person has some special interest to be served or some particular right to be preserved or protected over and above the interest held in common with the public at large." We quoted from Professor Davis, who said, "One who is in fact adversely affected by governmental action should have standing to challenge that action if it is judicially reviewable." (Pp. 796-797, quoting 3 Davis, Administrative Law Treatise (1st ed. 1958) p. 291.) Cases applying this standard include *Stocks v. City of Irvine (1981) 114 Cal.App.3d 520 [170 Cal.Rptr. 724]*, which held that low-income residents of Los Angeles had standing to challenge exclusionary zoning laws of suburban communities which prevented the plaintiffs from moving there; *Taschner* v. *City Council, supra*, 31 Cal.App.3d 48, which held that a property owner has standing to challenge an ordinance which may limit development of the owner's property; and *Felt v. Waughop (1924) 193 Cal. 498 [225 P. 862]*, which held that a city voter has standing to compel the city clerk to certify a correct list of candidates for municipal office. Other cases illustrate the limitation on standing: *Carsten v. Psychology Examining Com., supra, 27 Cal.3d 793*, held that a member of the committee who was neither seeking a license nor in danger of losing one had no standing to challenge **[**1318]** **[***76]** a change in the method of computing the passing score on the licensing examination; *Parker v. Bowron (1953) 40 Cal.2d 344 [254 P.2d 6]* held that a union official who was neither a city employee nor a city resident had no standing to compel a city to follow a prevailing wage ordinance; and *Dunbar v. Governing Board (1969) 275 Cal.App.2d 14 [79 Cal.Rptr. 662]* held that a member of a student organization had standing to challenge a college district's rule barring a speaker from campus, but persons who merely planned to hear him speak did not.

2 It is of no importance that plaintiffs did not request issuance of a writ of mandate. In *Taschner v. City Council (1973) 31 Cal.App.3d 48, 56 [107 Cal.Rptr. 214]* (overruled on other

grounds in *Associated Home Builders etc., Inc. v. City of Livermore (1976) 18 Cal.3d 582, 596 [135 Cal.Rptr. 41, 557 P.2d 473, 92 A.L.R.3d 1038]*), the court said that "[a]s against a general demurrer, a complaint for declaratory relief may be treated as a petition for mandate [citations], and where a complaint for declaratory relief alleges facts sufficient to entitle plaintiff to mandate, it is error to sustain a general demurrer without leave to amend."

In the present case, the trial court ruled on a motion for summary judgment, but based that ruling not on the evidentiary record (which supported plaintiffs' showing of irreparable injury) but on the issues as framed by the pleadings. This is essentially equivalent to a ruling on demurrer, and a judgment denying standing could not be sustained on the narrow ground that plaintiffs asked for the wrong form of relief without giving them an opportunity to correct the defect. (See *Residents of Beverly Glen, Inc. v. City of Los Angeles (1973) 34 Cal.App.3d 117, 127-128 [109 Cal.Rptr. 724]*.)

No one questions that plaintiffs are affected by the lack of funds to provide care for MIA's. Plaintiffs, except for plaintiff Rabinowitz, are not merely citizens and taxpayers; they are medically indigent persons living in Alameda County who have been and will be deprived of proper medical care if funding of MIA programs is inadequate. Like the other plaintiffs here, **[*341]** plaintiff Kinlaw, a 60-year-old woman with diabetes and hypertension, has no health insurance. Plaintiff Spier has a chronic back condition; inadequate funding has prevented him from obtaining necessary diagnostic procedures and physiotherapy. Plaintiff Tsosie requires medication for allergies and arthritis, and claims that because of inadequate funding she cannot obtain proper treatment. Plaintiff King, an epileptic, says she was unable to obtain medication from county clinics, suffered seizures, and had to go to a hospital. Plaintiff "Doe" asserts that when he tried to obtain treatment for AIDS-related symptoms, he had to wait four to five hours for an appointment and each time was seen by a different doctor. All of these are people personally dependent upon the quality of care of Alameda County's MIA program; most have experienced inadequate care because the program was underfunded, and all can anticipate future deficiencies in care if the state continues its refusal to fund the program fully.

The majority, however, argues that the county has no duty to use additional subvention funds for the care of MIA's because under *Government Code section 17563* "[a]ny funds received by a local agency . . . pursuant to the provisions of this chapter may be used for any public purpose." Since the county may use the funds for other purposes, it concludes that MIA's have no special interest in the subvention. [3]

3 The majority's argument assumes that the state will comply with a judgment for plaintiffs by providing increased subvention funds. If the state were instead to comply by restoring Medi-Cal coverage for MIA's, or some other method of taking responsibility for their health needs, plaintiffs would benefit directly.

This argument would be sound if the county were already meeting its obligations to MIA's under *Welfare and Institutions Code section 17000*. If that were the case, the county could use the subvention funds as it chose, and plaintiffs would have no more interest in the matter than any other county resident or taxpayer. But such is not the case at bar. Plaintiffs here allege that the county is not complying with its duty, mandated by *Welfare and Institutions Code section 17000*, to provide health care for the medically indigent; the county admits its failure but pleads lack of funds. Once the county receives adequate funds, it must perform its statutory duty under *section 17000 of the Welfare and Institutions Code*. If it refused, an action in mandamus would lie to compel performance. (See *Mooney v. Pickett (1971) 4 Cal.3d 669 [94 Cal.Rptr. 279, 483 P.2d 1231]*.) In fact, the county has made clear throughout this litigation that it would use the subvention funds to provide care for MIA's. The majority's conclusion that plaintiffs lack a special, beneficial interest in the state's compliance with article XIII B ignores the practical realities of health care funding.

Moreover, we have recognized an exception to the rule that a plaintiff must be beneficially interested. "Where the question is one of public right **[*342]** and the object of the mandamus is to procure the enforcement of a public duty, the relator need not show that he has any legal or special interest in the result, since it is sufficient that he is interested as a citizen in having the laws executed and the duty in question **[**1319]** **[***77]** enforced." (*Bd. of Soc. Welfare v. County of L. A. (1945) 27 Cal.2d 98, 100-101 [162 P.2d 627]*.) We explained in *Green v. Obledo (1981) 29 Cal.3d 126, 144 [172 Cal.Rptr. 206, 624 P.2d 256]*, that this "exception promotes the policy of guaranteeing citizens the opportunity to ensure that no governmental body impairs or defeats the purpose of legislation establishing a public right. . . . It has often been invoked by California courts. [Citations.]"

Green v. *Obledo* presents a close analogy to the present case. Plaintiffs there filed suit to challenge whether a state welfare regulation limiting deductibility of work-related expenses in determining eligibility for

aid to families with dependent children (AFDC) assistance complied with federal requirements. Defendants claimed that plaintiffs were personally affected only by a portion of the regulation, and had no standing to challenge the balance of the regulation. We replied that "[t]here can be no question that the proper calculation of AFDC benefits is a matter of public right [citation], and plaintiffs herein are certainly citizens seeking to procure the enforcement of a public duty. [Citation.] It follows that plaintiffs have standing to seek a writ of mandate commanding defendants to cease enforcing [the regulation] in its entirety." (*29 Cal.3d at p. 145.*)

We again invoked the exception to the requirement for a beneficial interest in *Common Cause v. Board of Supervisors, supra, 49 Cal.3d 432*. Plaintiffs in that case sought to compel the county to deputize employees to register voters. We quoted *Green v. Obledo, supra, 29 Cal.3d 126, 144*, and concluded that "[t]he question in this case involves a public right to voter outreach programs, and plaintiffs have standing as citizens to seek its vindication." (*49 Cal.3d at p. 439.*) We should reach the same conclusion here.

B. *Government Code sections 17500- 17630 do not create an exclusive remedy which bars citizen-plaintiffs from enforcing article XIII B.*

Four years after the enactment of article XIII B, the Legislature enacted *Government Code sections 17500 through 17630* to implement article XIII B, section 6. These statutes create a quasi-judicial body called the Commission on State Mandates, consisting of the state Controller, state Treasurer, state Director of Finance, state Director of the Office of Planning and Research, and one public member. The commission has authority to "hear and decide upon [any] claim" by a local government that it "is entitled to be reimbursed by the state" for costs under article XIII B. (*Gov. Code, § 17551,* **[*343]** *subd. (a).*) Its decisions are subject to review by an action for administrative mandamus in the superior court. (See *Gov. Code, § 17559.*)

The majority maintains that a proceeding before the Commission on State Mandates is the exclusive means for enforcement of article XIII B, and since that remedy is expressly limited to claims by local agencies or school districts (*Gov. Code, § 17552*), plaintiffs lack standing to enforce the constitutional provision. [4] I disagree, for two reasons.

> 4 The majority emphasizes the statement of purpose of *Government Code section 17500*: "The Legislature finds and declares that the existing system for reimbursing local agencies and school districts for the costs of state-mandated local programs has not provided for the effective determination of the state's responsibilities under *section 6 of article XIII B of the California Constitution.* The Legislature finds and declares that the failure of the existing process to adequately and consistently resolve the complex legal questions involved in the determination of state-mandated costs has led to an increasing reliance by local agencies and school districts on the judiciary, and, therefore, in order to relieve unnecessary congestion of the judicial system, it is necessary to create a mechanism which is capable of rendering sound quasi-judicial decisions and providing an effective means of resolving disputes over the existence of state-mandated local programs."
>
> The "existing system" to which *Government Code section 17500* referred was the Property Tax Relief Act of 1972 (*Rev. & Tax. Code, §§ 2201- 2327*), which authorized local agencies and school boards to request reimbursement from the state Controller. Apparently dissatisfied with this remedy, the agencies and boards were bypassing the Controller and bringing actions directly in the courts. (See, e.g., *County of Contra Costa v. State of California (1986) 177 Cal.App.3d 62 [222 Cal.Rptr. 750].*) The legislative declaration refers to this phenomena. It does not discuss suits by individuals.

[1320]** **[***78]** First, *Government Code section 17552* expressly addressed the question of exclusivity of remedy, and provided that "[t]his chapter shall provide the sole and exclusive procedure by which *a local agency or school district* may claim reimbursement for costs mandated by the state as required by *Section 6 of Article XIII B of the California Constitution.*" (Italics added.) The Legislature was aware that local agencies and school districts were not the only parties concerned with state mandates, for in *Government Code section 17555* it provided that "any other interested organization or individual may participate" in the commission hearing. Under these circumstances the Legislature's choice of words -- "the sole and exclusive procedure by which a local agency or school district may claim reimbursement" -- limits the procedural rights of those claimants only, and does not affect rights of other persons. *Expressio unius est exclusio alterius* -- "the expression of certain things in a statute necessarily involves exclusion of other things not expressed." (*Henderson v. Mann Theatres Corp. (1976) 65 Cal.App.3d 397, 403 [135 Cal.Rptr. 266].*)

The case is similar in this respect to *Common Cause v. Board of Supervisors, supra, 49 Cal.3d 432*. Here defendants contend that the counties' right of action under *Government Code sections 17551- 17552* impliedly ex-

cludes [*344] any citizen's remedy; in *Common Cause* defendants claimed the Attorney General's right of action under *Elections Code section 304* impliedly excluded any citizen's remedy. We replied that "the plain language of *section 304* contains no limitation on the right of private citizens to sue to enforce the section. To infer such a limitation would contradict our long-standing approval of citizen actions to require governmental officials to follow the law, expressed in our expansive interpretation of taxpayer standing [citations], and our recognition of a 'public interest' exception to the requirement that a petitioner for writ of mandate have a personal beneficial interest in the proceedings [citations]." (*49 Cal.3d at p. 440*, fn. omitted.) Likewise in this case the plain language of *Government Code sections 17551-17552* contain no limitation on the right of private citizens, and to infer such a right would contradict our long-standing approval of citizen actions to enforce public duties.

The United States Supreme Court reached a similar conclusion in *Rosado v. Wyman (1970) 397 U.S. 397 [25 L.Ed.2d 442, 90 S.Ct. 1207]*. In that case New York welfare recipients sought a ruling that New York had violated federal law by failing to make cost-of-living adjustments to welfare grants. The state replied that the statute giving the Department of Health, Education and Welfare authority to cut off federal funds to noncomplying states constituted an exclusive remedy. The court rejected the contention, saying that "[w]e are most reluctant to assume Congress has closed the avenue of effective judicial review to those individuals most directly affected by the administration of its program." (P. 420 [*25 L.Ed.2d at p. 460*].) The principle is clear: the persons actually harmed by illegal state action, not only some administrator who has no personal stake in the matter, should have standing to challenge that action.

Second, article XIII B was enacted to protect taxpayers, not governments. Section 1 and 2 of article XIII B establish strict limits on state and local expenditures, and require the refund of all taxes collected in excess of those limits. Section 6 of article XIII B prevents the state from evading those limits and burdening county taxpayers by transferring financial responsibility for a program to a county, yet counting the cost of that program toward the limit on state expenditures.

These provisions demonstrate a profound distrust of government and a disdain for excessive government spending. An exclusive remedy under which only governments can enforce article XIII B, and the taxpayer-citizen can appear only if a government [**1321] [***79] has first instituted proceedings, is inconsistent with the ethos that led to article XIII B. The drafters of article XIII B and the voters who enacted it would not accept that the state Legislature -- the principal body regulated by the article -- could establish a procedure [*345] under which the only way the article can be enforced is for local governmental bodies to initiate proceedings before a commission composed largely of state financial officials.

One obvious reason is that in the never-ending attempts of state and local government to obtain a larger proportionate share of available tax revenues, the state has the power to coerce local governments into forgoing their rights to enforce article XIII B. An example is the Brown-Presley Trial Court Funding Act (*Gov. Code, § 77000 et seq.*), which provides that the county's acceptance of funds for court financing may, in the discretion of the Governor, be deemed a waiver of the counties' rights to proceed before the commission on all claims for reimbursement for state-mandated local programs which existed and were not filed prior to passage of the trial funding legislation. [5] The ability of state government by financial threat or inducement to persuade counties to waive their right of action before the commission renders the counties' right of action inadequate to protect the public interest in the enforcement of article XIII B.

5 "(a) The initial decision by a county to opt into the system pursuant to Section 77300 *shall constitute a waiver of all claims for reimbursement for state-mandated local programs not theretofore approved by the State Board of Control, the Commission on State Mandates, or the courts to the extent the Governor, in his discretion, determines that waiver to be appropriate*; provided, that a decision by a county to opt into the system pursuant to Section 77300 beginning with the second half of the 1988-89 fiscal year shall not constitute a waiver of a claim for reimbursement based on a statute chaptered on or before the date the act which added this chapter is chaptered, which is filed in acceptable form on or before the date the act which added this chapter is chaptered. A county may petition the Governor to exempt any such claim from this waiver requirement; and the Governor, in his discretion, may grant the exemption in whole or in part. The waiver shall not apply to or otherwise affect any claims accruing after initial notification. Renewal, renegotiation, or subsequent notification to continue in the program shall not constitute a waiver. [para.] (b) The initial decision by a county to opt into the system pursuant to Section 77300 shall constitute a waiver of any claim, cause of action, or action whenever filed, with respect to the Trial Court Funding Act of 1985, Chapter 1607 of the Statutes of 1985, or Chapter 1211 of the Statutes of 1987." (*Gov. Code, § 77203.5*, italics added.)

> "As used in this chapter, 'state-mandated local program' *means any and all reimbursements owed or owing by operation of either Section 6 of Article XIII B of the California Constitution*, or *Section 17561 of the Government Code*, or both." (*Gov. Code, § 77005*, italics added.)

The facts of the present litigation also demonstrate the inadequacy of the commission remedy. The state began transferring financial responsibility for MIA's to the counties in 1982. Six years later no county had brought a proceeding before the commission. After the present suit was filed, two counties filed claims for 70 percent reimbursement. Now, nine years after the 1982 legislation, the counties' claims are pending before the Court of Appeal. After that court acts, and we decide whether to review its decision, the matter may still have to go back to the commission for hearings to **[*346]** determine the amount of the mandate -- which is itself an appealable order. When an issue involves the life and health of thousands, a procedure which permits this kind of delay is not an adequate remedy.

In sum, effective, efficient enforcement of article XIII B requires that standing to enforce that measure be given to those harmed by its violation -- in this case, the medically indigent -- and not be vested exclusively in local officials who have no personal interest at stake and are subject to financial and political pressure to overlook violations.

C. *Even if plaintiffs lack standing this court should nevertheless address and resolve the merits of the appeal.*

Although ordinarily a court will not decide the merits of a controversy if the plaintiffs lack standing (see *McKinny v. Board of Trustees (1982) 31 Cal.3d 79, 90 [181 Cal.Rptr. 549, 642 P.2d 460]*), we recognized **[**1322]** **[***80]** an exception to this rule in our recent decision in *Dix v. Superior Court, supra, 53 Cal.3d 442* (hereafter *Dix*). In *Dix*, the victim of a crime sought to challenge the trial court's decision to recall a sentence under *Penal Code section 1170*. We held that only the prosecutor, not the victim of the crime, had standing to raise that issue. We nevertheless went on to consider and decide questions raised by the victim concerning the trial court's authority to recall a sentence under *Penal Code section 1170, subdivision (d)*. We explained that the sentencing issues "are significant. The case is fully briefed and all parties apparently seek a decision on the merits. Under such circumstances, we deem it appropriate to address [the victim's] sentencing arguments for the guidance of the lower courts. Our discretion to do so under analogous circumstances is well settled. [Citing cases explaining when an appellate court can decide an issue despite mootness.]" (*53 Cal.3d at p. 454*.) In footnote we added that "Under *article VI, section 12, subdivision (b) of the California Constitution* . . . , we have jurisdiction to 'review the *decision of a Court of Appeal* in any cause.' (Italics added.) Here the Court of Appeal's decision addressed two issues -- standing and merits. Nothing in *article VI, section 12(b)* suggests that, having rejected the Court of Appeal's conclusion on the preliminary issue of standing, we are foreclosed from 'review[ing]' the second subject addressed and resolved in its decision." (Pp. 454-455, fn. 8.)

I see no grounds on which to distinguish *Dix*. The present case is also one in which the Court of Appeal decision addressed both standing and merits. It is fully briefed. Plaintiffs and the county seek a decision on the merits. While the state does not seek a decision on the merits in this proceeding, its appeal of the superior court decision in the mandamus proceeding brought by the County of Los Angeles (see maj. opn., *ante*, p. 330, fn. 2) shows that it is not opposed to an appellate decision on the merits.

[*347] The majority, however, notes that various state officials -- the Controller, the Director of Finance, the Treasurer, and the Director of the Office of Planning and Research -- did not participate in this litigation. Then in a footnote, the majority suggests that this is the reason they do not follow the *Dix* decision. (Maj. opn., *ante*, p. 336, fn. 9.) In my view, this explanation is insufficient. The present action is one for declaratory relief against the state. It is not necessary that plaintiffs also sue particular state officials. (The state has never claimed that such officials were necessary parties.) I do not believe we should refuse to reach the merits of this appeal because of the nonparticipation of persons who, if they sought to participate, would be here merely as amici curiae. [6]

> 6 It is true that these officials would participate in a proceeding before the Commission on State Mandates, but they would do so as members of an administrative tribunal. On appellate review of a commission decision, its members, like the members of the Public Utilities Commission or the Workers' Compensation Appeals Board, are not respondents and do not appear to present their individual views and positions. For example, in *Lucia Mar Unified School Dist. v. Honig (1988) 44 Cal.3d 830 [244 Cal.Rptr. 677, 750 P.2d 318]*, in which we reviewed a commission ruling relating to subvention payments for education of handicapped children, the named respondents were the state Superintendent of Public Instruction, the Department of Education, and the Commission on State Mandates. The individual

members of the commission were not respondents and did not participate.

The case before us raises no issues of departmental policy. It presents solely an issue of law which this court is competent to decide on the briefs and arguments presented. That issue is one of great significance, far more significant than any raised in *Dix*. Judges rarely recall sentencing under *Penal Code section 1170, subdivision (d)*; when they do, it generally affects only the individual defendant. In contrast, the legal issue here involves immense sums of money and affect budgetary planning for both the state and counties. State and county governments need to know, as soon as possible, what their **[**1323]** **[***81]** rights and obligations are; legislators considering proposals to deal with the current state and county budget crisis need to know how to frame legislation so it does not violate article XIII B. The practical impact of a decision on the people of this state is also of great importance. The failure of the state to provide full subvention funds and the difficulty of the county in filling the gap translate into inadequate staffing and facilities for treatment of thousands of persons. Until the constitutional issues are resolved the legal uncertainties may inhibit both levels of government from taking the steps needed to address this problem. A delay of several years until the Los Angeles case is resolved could result in pain, hardship, or even death for many people. I conclude that, whether or not plaintiffs have standing, this court should address and resolve the merits of the appeal.

D. *Conclusion as to standing.*

As I have just explained, it is not necessary for plaintiffs to have standing for us to be able to decide the merits of the appeal. Nevertheless, I conclude **[*348]** that plaintiffs have standing both as persons "beneficially interested" under *Code of Civil Procedure section 1086* and under the doctrine of *Green v. Obledo, supra, 29 Cal.3d 126*, to bring an action to determine whether the state has violated its duties under article XIII B. The remedy given local agencies and school districts by *Government Code sections 17500- 17630* is, as *Government Code section 17552* states, the exclusive remedy by which those bodies can challenge the state's refusal to provide subvention funds, but the statute does not limit the remedies available to individual citizens.

III. Merits of the Appeal

A. *State funding of care for MIA's.*

Welfare and Institutions Code section 17000 requires every county to "relieve and support" all indigent or incapacitated residents, except to the extent that such persons are supported or relieved by other sources. [7] From 1971 until 1982, and thus at the time article XIII B became effective, counties were not required to pay for the provision of health services to MIA's, whose health needs were met through the state-funded Medi-Cal program. Since the medical needs of MIA's were fully met through other sources, the counties had no duty under *Welfare and Institutions Code section 17000* to meet those needs. While the counties did make general contributions to the Medi-Cal program (which covered persons other than MIA's) from 1971 until 1978, at the time article XIII B became effective in 1980 the counties were not required to make any financial contributions to Medi-Cal. It is therefore undisputed that the counties were not required to provide financially for the health needs of MIA's when article XIII B became effective. The state funded all such needs of MIA's.

7 *Welfare and Institutions Code section 17000* provides that "[e]very county . . . shall relieve and support all incompetent, poor, indigent persons, and those incapacitated by age, disease, or accident, lawfully resident therein, when such persons are not supported and relieved by their relatives or friends, by their own means, or by state hospitals or other state or private institutions."

In 1982, the Legislature passed Assembly Bill No. 799 (1981-1982 Reg. Sess.; Stats. 1982, ch. 328, pp. 1568-1609) (hereafter AB No. 799), which removed MIA's from the state-funded Medi-Cal program as of January 1, 1983, and thereby transferred to the counties, through the County Medical Services Plan which AB No. 799 created, the financial responsibility to provide health services to approximately 270,000 MIA's. AB No. 799 required that the counties provide health care for MIA's, yet appropriated only 70 percent of what the state would have spent on MIA's had those persons remained a state responsibility under the Medi-Cal program.

Since 1983, the state has only partially defrayed the costs to the counties of providing health care to MIA's. Such state funding to counties was **[*349]** initially relatively constant, generally more than $ 400 million per year. By 1990, however, state **[***82]** funding **[**1324]** had decreased to less than $ 250 million. The state, however, has always included the full amount of its former obligation to provide for MIA's under the Medi-Cal program in the year preceding July 1, 1980, as part of its article XIII B "appropriations limit," i.e., as part of the base amount of appropriations on which subsequent annual adjustments for cost-of-living and population changes would be calculated. About $ 1 billion has been added to the state's adjusted spending limit for population growth and inflation *solely* because of the state's inclusion of all MIA expenditures in the appropriation limit established for its base year, 1979-1980. The state has not made proportional increases in the sums

provided to counties to pay for the MIA services funded by the counties since January 1, 1983.

B. *The function of article XIII B.*

Our recent decision in *County of Fresno v. State of California (1991) 53 Cal.3d 482, 486-487 [280 Cal.Rptr. 92, 808 P.2d 235]* (hereafter *County of Fresno*), explained the function of article XIII B and its relationship to article XIII A, enacted one year earlier:

"At the June 6, 1978, Primary Election, article XIII A was added to the Constitution through the adoption of Proposition 13, an initiative measure aimed at controlling ad valorem property taxes and the imposition of new 'special taxes.' (*Amador Valley Joint Union High Sch. Dist. v. State Bd. of Equalization (1978) 22 Cal.3d 208, 231-232 [149 Cal.Rptr. 239, 583 P.2d 1281].*) The constitutional provision imposes a limit on the power of state and local governments to adopt and levy taxes. (*City of Sacramento v. State of California (1990) 50 Cal.3d 51, 59, fn. 1 [266 Cal.Rptr. 139, 785 P.2d 522]* (*City of Sacramento*).)

"At the November 6, 1979, Special Statewide Election, article XIII B was added to the Constitution through the adoption of Proposition 4, another initiative measure. That measure places limitations on the ability of both state and local governments to appropriate funds for expenditures.

"'Articles XIII A and XIII B work in tandem, together restricting California governments' power both to levy and to spend [taxes] for public purposes.' (*City of Sacramento, supra, 50 Cal.3d at p. 59, fn. 1.*)

"Article XIII B of the Constitution was intended . . . to provide 'permanent protection for taxpayers from excessive taxation' and 'a reasonable way to provide discipline in tax spending at state and local levels.' (See *County of Placer v. Corin (1980) 113 Cal.App.3d 443, 446 [170 Cal.Rptr. 232]*, quoting and following Ballot Pamp., Proposed Stats. and Amends. to Cal. Const. with arguments to voters, Special Statewide Elec. (Nov. 6, 1979), argument **[*350]** in favor of Prop. 4, p. 18.) To this end, it establishes an 'appropriations limit' for both state and local governments (*Cal. Const., art. XIII B, § 8, subd. (h)*) and allows no 'appropriations subject to limitation' in excess thereof (*id.*, § 2). [8] (See *County of Placer v. Corin, supra, 113 Cal.App.3d at p. 446.*) It defines the relevant 'appropriations subject to limitation' as 'any authorization to expend during a fiscal year the proceeds of taxes . . . .' (*Cal. Const., art. XIII B, § 8, subd. (b).*)" (*County of Fresno, supra, 53 Cal.3d at p. 486.*)

8 Article XIII B, section 1 provides: "The total annual appropriations subject to limitation of the state and of each local government shall not exceed the appropriations limit of such entity of government for the prior year adjusted for changes in the cost of living and population except as otherwise provided in this Article."

Under section 3 of article XIII B the state may transfer financial responsibility for a program to a county if the state and county mutually agree that the appropriation limit of the state will be decreased and that of the county increased by the same amount. [9] **[**1325]** **[***83]** Absent such an agreement, however, section 6 of article XIII B generally precludes the state from avoiding the spending limits it must observe by shifting to local governments programs and their attendant financial burdens which were a state responsibility prior to the effective date of article XIII B. It does so by requiring that "Whenever the Legislature or any state agency mandates a new program or higher level of service on any local government, the state shall provide a subvention of funds to reimburse such local government for the cost of such program or increased level of service . . . ." [10]

9 Section 3 of article XIII B reads in relevant part: "The appropriations limit for any fiscal year . . . shall be adjusted as follows:

"(a) In the event that the financial responsibility of providing services is transferred, in whole or in part . . . from one entity of government to another, then for the year in which such transfer becomes effective the appropriation limit of the transferee entity shall be increased by such reasonable amount as the said entities shall mutually agree and the appropriations limit of the transferor entity shall be decreased by the same amount. . . ."

10 Section 6 of article XIII B further provides that the "Legislature may, but need not, provide such subvention of funds for the following mandates: (a) Legislative mandates requested by the local agency affected; (b) Legislation defining a new crime or changing an existing definition of a crime; or (c) Legislative mandates enacted prior to January 1, 1975, or executive orders or regulations initially implementing legislation enacted prior to January 1, 1975." None of these exceptions apply in the present case.

"Section 6 was included in article XIII B in recognition that article XIII A of the Constitution severely restricted the taxing powers of local governments. (See *County of Los Angeles [*v. *State of California* (1987)] *43 Cal.3d 46, 61 [233 Cal.Rptr. 38, 729 P.2d 202].*) The provision was intended to preclude the state from shifting financial responsibility for carrying out governmental functions onto local entities that were ill equipped to handle the task. (*Ibid.*; see *Lucia Mar Unified School*

Dist. v. Honig, supra, 44 Cal.3d 830, 836, fn. 6.) Specifically, it was designed to protect the tax **[*351]** revenues of local governments from state mandates that would require expenditure of such revenues." (*County of Fresno, supra, 53 Cal.3d at p. 487.*)

C. *Applicability of article XIII B to health care for MIA's.*

The state argues that care of the indigent, including medical care, has long been a county responsibility. It claims that although the state undertook to fund this responsibility from 1979 through 1982, it was merely temporarily (as it turned out) helping the counties meet their responsibilities, and that the subsequent reduction in state funding did not impose any "new program" or "higher level of service" on the counties within the meaning of section 6 of article XIII B. Plaintiffs respond that the critical question is not the traditional roles of the county and state, but who had the fiscal responsibility on November 6, 1979, when article XIII B took effect. The purpose of article XIII B supports the plaintiffs' position.

As we have noted, article XIII A of the Constitution (Proposition 13) and article XIII B are complementary measures. The former radically reduced county revenues, which led the state to assume responsibility for programs previously financed by the counties. Article XIII B, enacted one year later, froze both state and county appropriations at the level of the 1978-1979 budgets -- a year when the budgets included state financing for the prior county programs, but not county financing for these programs. Article XIII B further limited the state's authority to transfer obligations to the counties. Reading the two together, it seems clear that article XIII B was intended to limit the power of the Legislature to retransfer to the counties those obligations which the state had assumed in the wake of Proposition 13.

Under article XIII B, both state and county appropriations limits are set on the basis of a calculation that begins with the budgets in effect when article XIII B was enacted. If the state could transfer to the county a program for which the state at that time had full financial responsibility, the county could be forced to assume additional financial obligations without the right to appropriate additional moneys. The state, at the same time, would get credit toward its appropriations limit for expenditures it did not pay. County taxpayers **[**1326] [***84]** would be forced to accept new taxes or see the county forced to cut existing programs further; state taxpayers would discover that the state, by counting expenditures it did not pay, had acquired an actual revenue surplus while avoiding its obligation to refund revenues in excess of the appropriations limit. Such consequences are inconsistent with the purpose of article XIII B.

Our decisions interpreting article XIII B demonstrate that the state's subvention requirement under section 6 is not vitiated simply because the **[*352]** "program" existed before the effective date of article XIII B. The alternate phrase of section 6 of article XIII B, "'higher level of service[,]' . . . must be read in conjunction with the predecessor phrase 'new program' to give it meaning. Thus read, it is apparent that *the subvention requirement for increased or higher level of service is directed to state mandated increases in the services provided by local agencies in existing 'programs.'*" (*County of Los Angeles v. State of California (1987) 43 Cal.3d 46, 56 [233 Cal.Rptr. 38, 729 P.2d 202]*, italics added.)

Lucia Mar Unified School Dist. v. Honig, supra, 44 Cal.3d 830, presents a close analogy to the present case. The state Department of Education operated schools for severely handicapped students, but prior to 1979 *school districts were required by statute to contribute* to education of those students from the district at the state schools. In 1979, in response to the restrictions on school district revenues imposed by Proposition 13, the statutes requiring such district contributions were repealed and the state assumed full responsibility for funding. The state funding responsibility continued until June 28, 1981, when *Education Code section 59300* (hereafter *section 59300*), requiring school districts to share in these costs, became effective.

The plaintiff districts filed a test claim before the commission, contending they were entitled to state reimbursement under section 6 of article XIII B. The commission found the plaintiffs were not entitled to state reimbursement, on the rationale that the increase in costs to the districts compelled by *section 59300* imposed no new program or higher level of services. The trial and intermediate appellate courts affirmed on the ground that *section 59300* called for only an "'adjustment of costs'" of educating the severely handicapped, and that "*a shift in the funding of an existing program is not a new program or a higher level of service*" within the meaning of article XIII B. (*Lucia Mar Unified School Dist. v. Honig, supra, 44 Cal.3d at p. 834*, italics added.)

We reversed, rejecting the state's theories that the funding shift to the county of the subject program's costs does not constitute a new program. "[There can be no] doubt that although the schools for the handicapped have been operated by the state for many years, the program was new insofar as plaintiffs are concerned, since *at the time section 59300 became effective* they were not required to contribute to the education of students from their districts at such schools. [para.] . . . To hold, under the circumstances of this case, that a shift in funding of

an existing program from the state to a local entity is not a new program as to the local agency would, we think, violate the intent underlying section 6 of article XIIIB. That article imposed spending limits on state and local governments, and it followed by one year the adoption by initiative of article XIIIA, which severely limited the taxing **[*353]** power of local governments. . . . [para.] The intent of the section would plainly be violated if the state could, while retaining administrative control [11] of programs it has supported with state **[***85]** tax money, **[**1327]** simply shift the cost of the programs to local government on the theory that the shift does not violate section 6 of article XIIIB because the programs are not 'new.' Whether the shifting of costs is accomplished by compelling local governments to pay the cost of entirely new programs created by the state, *or by compelling them to accept financial responsibility in whole or in part for a program which was funded entirely by the state before the advent of article XIIIB, the result seems equally violative of the fundamental purpose underlying section 6 of that article.*" (*Lucia Mar Unified School Dist. v. Honig, supra, 44 Cal.3d at pp. 835-836*, fn. omitted, italics added.)

> 11 The state notes that, in contrast to the program at issue in *Lucia Mar*, it has not retained administrative control over aid to MIA's. But the quoted language from *Lucia Mar*, while appropriate to the facts of that case, was not intended to establish a rule limiting article XIII B, section 6, to instances in which the state retains administrative control over the program that it requires the counties to fund. The constitutional language admits of no such limitation, and its recognition would permit the Legislature to evade the constitutional requirement.

The state seeks to distinguish *Lucia Mar* on the ground that the education of handicapped children in state schools had never been the responsibility of the local school district, but overlooks that the local district had previously been required to contribute to the cost. Indeed the similarities between *Lucia Mar* and the present case are striking. In *Lucia Mar*, prior to 1979 the state and county shared the cost of educating handicapped children in state schools; in the present case from 1971-1979 the state and county shared the cost of caring for MIA's under the Medi-Cal program. In 1979, following enactment of Proposition 13, the state took full responsibility for both programs. Then in 1981 (for handicapped children) and 1982 (for MIA's), the state sought to shift some of the burden back to the counties. To distinguish these cases on the ground that care for MIA's is a county program but education of handicapped children a state program is to rely on arbitrary labels in place of financial realities.

The state presents a similar argument when it points to the following emphasized language from *Lucia Mar Unified School Dist. v. Honig, supra, 44 Cal.3d 830*: "[B]ecause *section 59300* shifts partial financial responsibility for the support of students in the state-operated schools from the state to school districts -- *an obligation the school districts did not have at the time article XIII B was adopted* -- it calls for plaintiffs to support a 'new program' within the meaning of section 6." (P. 836, fn. omitted, italics added.) It urges *Lucia Mar* reached its result *only* because the "program" requiring school district funding in that case *was not required by statute* at the effective date of **[*354]** article XIII B. The state then argues that the case at bench is distinguishable because it contends Alameda County had a continuing obligation *required by statute* antedating that effective date, which had only been "temporarily" [12] suspended when article XIII B became effective. I fail to see the distinction between a case -- *Lucia Mar* -- in which no existing statute as of 1979 imposed an obligation on the local government and one -- this case -- in which the statute existing in 1979 imposed no obligation on local government.

> 12 The state's repeated emphasis on the "temporary" nature of its funding is a form of post hoc reasoning. At the time article XIII B was enacted, the voters did not know which programs would be temporary and which permanent.

The state's argument misses the salient point. As I have explained, the application of section 6 of article XIII B does not depend upon when the program was created, but upon who had the burden of funding it when article XIII B went into effect. Our conclusion in *Lucia Mar* that the educational program there in issue was a "new" program as to the school districts was not based on the presence or absence of any antecedent statutory obligation therefor. *Lucia Mar* determined that whether the program was new *as to the districts* depended on *when* they were compelled to assume the obligation to partially fund an existing program which they had not funded at the time article XIII B became effective.

The state further relies on two decisions, *Madera Community Hospital v. County of Madera (1984) 155 Cal.App.3d 136 [201 Cal.Rptr. 768]* and *Cooke v. Superior Court (1989) 213 Cal.App.3d 401 [261 Cal.Rptr. 706]*, which hold that the county has a statutory obligation to provide medical care for indigents, but that it need not provide precisely **[**1328]** **[***86]** the same level of services as the state provided under Medi-Cal. [13] Both are correct, but irrelevant to this case. [14] The county's obligation to MIA's is defined by *Welfare and Institutions Code section 17000*, not by the former Medi-Cal program. [15] If the **[*355]** state, in transferring an

obligation to the counties, permits them to provide less services than the state provided, the state need only pay for the lower level of services. But it cannot escape its responsibility entirely, leaving the counties with a state-mandated obligation and no money to pay for it.

13 It must, however, provide a *comparable* level of services. (See *Board of Supervisors v. Superior Court (1989) 207 Cal.App.3d 552, 564 [254 Cal.Rptr. 905]*.)

14 Certain language in *Madera Community Hospital v. County of Madera, supra, 155 Cal.App.3d 136*, however, is questionable. That opinion states that the "Legislature intended that County bear an obligation to its poor and indigent residents, *to be satisfied from county funds*, notwithstanding federal or state programs which exist concurrently with County's obligation and alleviate, to a greater or lesser extent, County's burden." (P. 151.) *Welfare and Institutions Code section 17000* by its terms, however, requires the county to provide support to residents only "when such persons are not supported and relieved by their relatives or friends, by their own means, or by state hospitals or other state or private institutions." Consequently, to the extent that the state or federal governments provide care for MIA's, the county's obligation to do so is reduced pro tanto.

15 The county's right to subvention funds under article XIII B arises because its duty to care for MIA's is a state-mandated responsibility; if the county had no duty, it would have no right to funds. No claim is made here that the funding of medical services for the indigent shifted to Alameda County is not a program "'mandated'" by the state; i.e., that Alameda County has any option other than to pay these costs. (*Lucia Mar Unified School Dist. v. Honig, supra, 44 Cal.3d at pp. 836-837*.)

The state's arguments are also undercut by the fact that it continues to use the approximately $ 1 billion in spending authority, generated by its previous total funding of the health care program in question, as a portion of its initial *base spending limit* calculated pursuant to sections 1 and 3 of article XIII B. In short, the state may maintain here that care for MIA's is a county obligation, but when it computes its appropriation limit it treats the entire cost of such care as a state program.

IV. Conclusion

This is a time when both state and county governments face great financial difficulties. The counties, however, labor under a disability not imposed on the state, for article XIII A of the Constitution severely restricts their ability to raise additional revenue. It is, therefore, particularly important to enforce the provisions of article XIII B which prevent the state from imposing additional obligations upon the counties without providing the means to comply with these obligations.

The present majority opinion disserves the public interest. It denies standing to enforce article XIII B both to those persons whom it was designed to protect -- the citizens and taxpayers -- and to those harmed by its violation -- the medically indigent adults. And by its reliance on technical grounds to avoid coming to grips with the merits of plaintiffs' appeal, it permits the state to continue to violate article XIII B and postpones the day when the medically indigent will receive adequate health care.

TAB "17"

LEXSEE

Caution
As of: Jun 25, 2010

LONG BEACH UNIFIED SCHOOL DISTRICT, Plaintiff and Appellant, v. THE STATE OF CALIFORNIA et al., Defendants and Appellants; MARK H. BLOOD-GOOD, as Auditor-Controller, etc., et al., Defendants and Respondents

No. B033742

Court of Appeal of California, Second Appellate District, Division Five

225 Cal. App. 3d 155; 275 Cal. Rptr. 449; 1990 Cal. App. LEXIS 1198

November 15, 1990

SUBSEQUENT HISTORY: [***1] Appellants' petitions for review by the Supreme Court were denied February 28, 1991. Lucas, C. J., did not participate therein.

PRIOR HISTORY: Superior Court of Los Angeles County, No. C606020, Robert I. Weil, Judge.

DISPOSITION: We conclude that because the doctrines of collateral estoppel and waiver are inapplicable to the facts of this case, the trial court should have allowed State to challenge the decisions of the Board. However, we also determine, as a question of law, that the Executive Order requires local school boards to provide a higher level of service than is required constitutionally or by case law and that the Executive Order is a reimbursable state mandate pursuant to article XIII B, section 6 of the California Constitution. Former Revenue and Tax Code section 2234 does not provide reimbursement of the subject claim. Based on uncontradicted evidence, we modify the decision of the trial court by striking as sources of reimbursement the Special Fund for Economic Uncertainties "or similarly designated accounts." We also modify the judgment to include charging orders against certain funds appropriated through subsequent budget acts. We affirm the decision of the trial court that the Fines [***2] and Forfeitures Funds are not "reasonably available" to satisfy the Claim. Finally, we remand the matter to the trial court to determine whether at the time of its order, unexpended, unencumbered funds sufficient to satisfy the judgment remained in the approved budget line item account numbers. The trial court is also directed to determine this same issue with respect to the charging order. The judgment is affirmed as modified. Each party is to bear its own costs on appeal.

CASE SUMMARY:

PROCEDURAL POSTURE: Appellant state challenged an order from the Superior Court of Los Angeles County (California) stating that it was required to reimburse cross-appellant school district for mandated expenditures to integrate the schools, and cross-appellant challenged that part of the order stating that certain funds were not available for this reimbursement.

OVERVIEW: The California Department of Education issued an executive order mandating expenditures to integrate the schools, and when the legislature deleted the requested funding from its budget, cross-appellant school district filed a petition to compel reimbursement after the Board of Control approved the claim. The trial court stated that appellant state was required to make these reimbursements and designated specific funds as reasonably available for the payments, but also ruled that certain funds were not available for these payments. On appeal, the court affirmed the decision as modified, holding that the doctrines of collateral estoppel and waiver were inapplicable and that the trial court should have allowed appellant to challenge the initial decisions of Board of Control in this matter. However, the court concluded that as a matter of law the executive order was a reimbursable state mandate pursuant to Cal. Const. art. XIII B, § 6, not pursuant to former Cal. Rev. & Tax.

Code § 2234. The court modified the decision by striking certain funds as sources of reimbursement and affirmed that portion of the order stating that certain funds were not available for the payments.

OUTCOME: The court affirmed the order stating that appellant state was required to reimburse cross-appellant school district for mandated expenditures to integrate the schools because the executive order was a reimbursable state mandate under the California constitution and modified the designated funds for payment. The case was remanded to determine if unexpended, unencumbered funds existed in the approved budget line item account numbers.

CORE TERMS: reimbursement, executive order, school district, expenditure, mandated, reimburse, state-mandated, appropriation, state mandate, local governments, reasonably available, reimbursable, budget, levels of service, line item, segregation, funding, appropriated, alleviate, local agencies, ethnic, collateral estoppel, fiscal years, estoppel, guidelines, entity, desegregation, special fund, controller, budgets acts

LexisNexis(R) Headnotes

Administrative Law > Judicial Review > General Overview
Civil Procedure > Judgments > Preclusion & Effect of Judgments > Estoppel > Collateral Estoppel
[HN1]Collateral estoppel precludes a party from relitigating in a subsequent action matters previously litigated and determined. The traditional elements of collateral estoppel include the requirement that the prior judgment be "final."

Administrative Law > Agency Adjudication > Decisions > Collateral Estoppel
Civil Procedure > Judgments > Preclusion & Effect of Judgments > Estoppel > Collateral Estoppel
Environmental Law > Litigation & Administrative Proceedings > Judicial Review
[HN2]Finality for the purposes of administrative collateral estoppel may be understood as a two-step process: (1) the decision must be final with respect to action by the administrative agency (Cal. Civ. Proc. Code § 1094.5(a)); and (2) the decision must have conclusive effect. A decision attains the requisite administrative finality when the agency has exhausted its jurisdiction and possesses no further power to reconsider or rehear the claim. Next, the decision must have conclusive effect. In other words, the decision must be free from direct attack. A direct attack on an administrative decision may be made by appeal to the superior court for review by petition for administrative mandamus. Cal. Civ. Proc. Code § 1094.5. A decision will not be given collateral estoppel effect if such appeal has been taken or if the time for such appeal has not lapsed.

Civil Procedure > Pleading & Practice > Defenses, Demurrers & Objections > Waiver & Preservation
Civil Procedure > Appeals > Standards of Review
[HN3]A waiver occurs when there is an existing right, actual or constructive knowledge of its existence, and either an actual intention to relinquish it, or conduct so inconsistent with an intent to enforce the right as to induce a reasonable belief that it has been waived.) Ordinarily, the issue of waiver is a question of fact which is binding on the appellate court if the determination is supported by substantial evidence. However, the question is one of law when the evidence is not in conflict and is susceptible of only one reasonable inference.

Governments > State & Territorial Governments > Relations With Governments
[HN4]See Cal. Const. art. XIII B, § 6.

Constitutional Law > State Constitutional Operation
[HN5]In construing the meaning of the Cal. Const. art. VIIIB, § 6, the court must determine the intent of the voters by first looking to the language itself that should be construed in accordance with the natural and ordinary meaning of its words.

Civil Procedure > Jurisdiction > Subject Matter Jurisdiction > Jurisdiction Over Actions > General Overview
Civil Procedure > Remedies > Writs > Common Law Writs > Mandamus
[HN6]Lack of subject matter jurisdiction may be raised at any time.

Governments > Legislation > Interpretation
[HN7]A statute should be construed with reference to the whole system of law of which it is a part in order to ascertain the intent of the legislature. The legislative history of a statute may be considered in ascertaining legislative design.

Constitutional Law > Separation of Powers
Governments > Courts > Authority to Adjudicate

[HN8]A trial court cannot compel the legislature either to appropriate funds or to pay funds not yet appropriated. Cal. Const. art. III, § 3; art. XVI, § 7. However, no violation of the separation of powers doctrine occurs when a trial court orders appropriate expenditures from already existing funds. The test is whether such funds are reasonably available for the expenditures in question. Funds are "reasonably available" for reimbursement when the purposes for which those funds were appropriated are generally related to the nature of costs incurred. There is no requirement that the appropriations specifically refer to the particular expenditure or must past administrative practice sanction coverage from a particular fund.

SUMMARY:

CALIFORNIA OFFICIAL REPORTS SUMMARY

A school district filed a claim with the state Board of Control asserting that its expenditures related to its efforts to alleviate racial and ethnic segregation in its schools had been mandated by the state through an executive order (in the form of regulations issued by the state Department of Education) and were reimbursable pursuant to former Rev. & Tax. Code, § 2234, and Cal. Const., art. XIII B, § 6. The board approved the claim, but the Legislature deleted the requested funding from an appropriations bill and enacted a "finding" that the executive order did not impose a statemandated local program. The district then filed a petition to compel reimbursement pursuant to Code Civ. Proc., § 1085, and a complaint for declaratory relief. The trial court ruled that the doctrines of administrative collateral estoppel and waiver prevented the state from challenging the board's decisions. The court's judgment in favor of the district identified certain funds previously appropriated by the Legislature as "reasonably available" for reimbursement of the claimed expenditures. (Superior Court of Los Angeles County, No. C606020, Robert I. Weil, Judge.)

The Court of Appeal modified the trial court's decision by striking as sources of reimbursement the Special Fund for Economic Uncertainties "or similarly designated accounts," and by including charging orders against certain funds appropriated through subsequent budget acts. The court affirmed the judgment as so modified and remanded to the trial court to determine whether at the time of its order, there were, in the funds from which reimbursement could properly be paid, unexpended, unencumbered funds sufficient to satisfy the judgment. The court held that since the doctrines of collateral estoppel and waiver were inapplicable to the facts of the case, the trial court should have allowed the state to challenge the board's decisions. However, the court also held that the executive order required local school boards to provide a higher level of service than is required constitutionally or by case law and that the order was a reimbursable state mandate pursuant to Cal. Const., art. XIII B, § 6. The court further held that former Rev. & Tax. Code, § 2234, did not provide reimbursement of the subject claim. (Opinion by Lucas, P. J., with Ashby and Boren, JJ., concurring.)

HEADNOTES

CALIFORNIA OFFICIAL REPORTS HEADNOTES

Classified to California Digest of Official Reports, 3d Series

(1a) (1b) (1c) (1d) Judgments § 88--Collateral Estoppel--Finality of Judgment--Administrative Order--Where Appeal Still Possible. --In an action by a school district against the state to compel the state to reimburse the district for expenditures related to its efforts to alleviate racial and ethnic segregation, the doctrine of administrative collateral estoppel was inapplicable and did not prevent the state from litigating whether the state Board of Control properly considered the subject claim and whether the claim was reimbursable. The board had approved the claim but the Legislature had deleted the requested funding from an appropriations bill. The board's decisions were administratively final, for collateral estoppel purposes, since no party requested reconsideration within the applicable 10-day period, and no statute or regulation provided for further consideration of the matter by the board. However, a decision will not be given collateral estoppel effect if an appeal has been taken or if the time for such appeal has not lapsed. The applicable statute of limitations for review of the board's decisions was three years, and the school district's action was filed before this period lapsed.

(2) Judgments § 88--Collateral Estoppel--Finality of Judgment. --Collateral estoppel precludes a party from relitigating in a subsequent action matters previously litigated and determined. The traditional elements of collateral estoppel include the requirement that the prior judgment be "final."

(3a) (3b) Administrative Law § 81--Judicial Review and Relief--Finality of Administrative Action--For Collateral Estoppel Purposes. --Finality for the purposes of administrative collateral estoppel may be understood as a two-step process: the decision must be final with respect to action by the administrative agency, and the decision must have conclusive effect. A decision attains the requisite administrative finality when the agency has exhausted its jurisdiction and possesses no further power to reconsider or rehear the claim. To have

conclusive effect, the decision must be free from direct attack.

(4) Limitation of Actions § 30--Commencement of Period. --A statute of limitations commences to run at the point where a cause of action accrues and a suit may be maintained thereon.

(5a) (5b) (5c) Estoppel and Waiver § 23--Waiver--State's Right to Contest Board of Control's Findings as to State-mandated Costs. --In an action by a school district against the state to compel the state to reimburse the district for expenditures related to its efforts to alleviate racial and ethnic segregation, the doctrine of waiver did not preclude the state from contesting the state Board of Control's previous findings that the subject claim was reimbursable (the Legislature subsequently deleted the requested funding from an appropriations bill). The statute of limitations applicable to an appeal by the state from the board's decisions had not run at the time the state raised its affirmative defenses in the district's action, and this assertion of defenses was inconsistent with an intent on the state's part to waive its right to contest the board's decisions.

(6) Estoppel and Waiver § 19--Waiver--Requisites. --A waiver occurs when there is an existing right, actual or constructive knowledge of its existence, and either an actual intention to relinquish it, or conduct so inconsistent with an intent to enforce the right as to induce a reasonable belief that it has been waived. Ordinarily the issue of waiver is a question of fact that is binding on the appellate court if the determination is supported by substantial evidence. However, the question is one of law when the evidence is not in conflict and is susceptible of only one reasonable inference.

(7) Estoppel and Waiver § 6--Equitable Estoppel--Challenge to State Board of Control's Findings as to State-mandated Costs--Absence of Confidential Relationship. --In an action by a school district against the state to compel the state to reimburse the district for expenditures related to its efforts to alleviate racial and ethnic segregation, the state was not equitably estopped from challenging the state Board of Control's decisions finding that the subject claim was reimbursable as a state-mandated cost (the Legislature subsequently deleted the requested funding from an appropriations bill). In the absence of a confidential relationship, the doctrine of equitable estoppel is inapplicable where there is a mistake of law. There was no confidential relationship, and since the statute of limitations did not bar the state from litigating the mandate and reimbursability issues, the doctrine was inapplicable.

(8) Appellate Review § 145--Function of Appellate Court--Questions of Law. --On appeal by the state in an action by a school district to compel the state to reimburse the district for expenditures related to its efforts to alleviate racial and ethnic segregation, the appellate court's conclusion that the trial court erred in failing to consider the merits of the state's challenge to the state Board of Control's decisions that the subject claims were reimbursable as state-mandated costs did not require that the matter be remanded to the trial court for a full hearing, since the question of whether a cost is state-mandated is one of law.

(9a) (9b) (9c) Schools § 4--School Districts; Financing; Funds--Reimbursement of State-mandated Costs--Desegregation Expenditures. --A school district was entitled to reimbursement pursuant to Cal. Const., art. XIII B, § 6 (reimbursement of local governments for state-mandated costs or increased levels of service), for expenditures related to its efforts to alleviate racial and ethnic segregation in its schools, since an executive order (in the form of regulations issued by the state Department of Education) required a higher level of service and constituted a state mandate. The requirements of the order went beyond constitutional and case law requirements in that they required specific actions to alleviate segregation. Although under Cal. Const., art. XIII B, § 6, subd. (c), the state has discretion whether to reimburse pre-1975 mandates that are either statutes or executive orders implementing statutes, it cannot be inferred from this exception that reimbursability is otherwise dependent on the form of the mandate. Further, the district's claim was not defeated by Gov. Code, §§ 17561 and 17514, limiting reimbursement to certain costs incurred after July 1, 1980, the effective date of Cal. Const., art. XIII B, since the limitations contained in those sections are confined to the exception contained in Cal. Const., art. XIII B, § 6, subd. (c).

(10) State of California § 11--Fiscal Matters--Reimbursement to Local Governments for State-mandated Costs. --The subvention requirement of Cal. Const., art. XIII B, § 6 (reimbursement of local governments for state-mandated costs or increased levels of service), is directed to state-mandated increases in the services provided by local agencies in existing "programs." The drafters and electorate had in mind the commonly understood meaning of the term--programs that carry out the governmental function of providing services to the public, or laws that, to implement a state policy, impose unique requirements on local governments and do not apply generally to all residents and entities in the state.

[See 9 Witkin, Summary of Cal. Law (9th ed. 1989) Taxation, § 123.]

(11) Constitutional Law § 13--Construction of Constitutions--Language of Enactments. --In construing a constitutional provision enacted by the voters, a court must determine the intent of the voters by first looking to the language itself, which should be construed in accordance with the natural and ordinary meaning of its words.

(12) State of California § 11--Fiscal Matters--Reimbursement to Local Governments for State-mandate Costs--Executive Order as Mandate. --In Cal. Const., art. XIII B, § 6 (reimbursement of local governments for state-mandated costs or increased levels of service), "mandates" means "orders" or "commands," concepts broad enough to include executive orders as well as statutes. The concern that prompted the inclusion of § 6 in art. XIII B was the perceived attempt by the state to enact legislation or adopt administrative orders creating programs to be administered by local agencies, thereby transferring to those agencies the fiscal responsibility for providing services that the state believed should be extended to the public. It is clear that the primary concern of the voters was the increased financial burdens being shifted to local government, not the form in which those burdens appeared.

(13) Administrative Law § 88--Judicial Review and Relief--Exhaustion of Administrative Remedies--Claim by School District for Reimbursement of State-mandated Costs. --A school district did not fail to exhaust its administrative remedies in seeking reimbursement for expenditures related to its efforts to alleviate racial and ethnic segregation, based on its claim that the expenditures were mandated by a state executive order, where the state Board of Control approved the district's reimbursement claim, even though the state Commission on State Mandates subsequently succeeded to the functions of the board and the district never made a claim to the commission. The board's decisions in favor of the district became administratively final before the commission was in place, and there was no evidence that the commission did not consider these decisions by the board to be final. Although the commission was given jurisdiction over all claims that had not been included in a local government claims bill enacted before January 1, 1985, the subject claim was included in such a bill (which was signed into law only after the recommended appropriation was deleted). Under the statutory scheme, the district pursued the only relief that a disappointed claimant at such a juncture could pursue--an action in declaratory relief to declare an executive order void or unenforceable and to enjoin its enforcement. There was no requirement to seek further administrative review.

(14) Courts § 20--Subject Matter Jurisdiction--When Issue May Be Raised. --Lack of subject matter jurisdiction may be raised at any time.

(15a) (15b) Schools § 4--School Districts; Financing; Funds--Reimbursement of State-mandated Costs--Desegregation Expenditures--Applicability of Statute Requiring Reimbursement of Subsequently Mandated Costs. --A school district was not entitled to reimbursement on the basis of former Rev. & Tax. Code, § 2234 (reimbursement of school district for costs it is incurring that are subsequently mandated by a state), for expenditures related to its efforts to alleviate racial and ethnic segregation in its schools, since the executive order (in the form of regulations issued by the state Department of Education) that required the district to take specific actions to alleviate segregation fell outside the purview of § 2234. The "subsequently mandated" provision of § 2234 originally was contained in sections that set forth specific date limitations, and the Legislature likewise intended to limit claims made pursuant to § 2234. The use of the language "subsequently mandated" merely describes an additional circumstance in which the state will reimburse costs. Since the executive order fell outside the January 1, 1978, limits set by Rev. & Tax. Code, § 2207.5, Rev. & Tax. Code, § 2234, did not provide reimbursement to the district.

(16) Statutes § 39--Construction--Giving Effect to Statute--Conformation of Parts. --A statute should be construed with reference to the whole system of law of which it is a part in order to ascertain the intent of the Legislature. The legislative history of the statute may be considered in ascertaining legislative design.

(17a) (17b) (17c) Constitutional Law § 40--Distribution of Governmental Powers--Judicial Power--Appropriation of Funds--Reimbursement of State-mandated Costs. --In an action by a school district against the state to compel the state to reimburse the district for expenditures related to its efforts to alleviate racial and ethnic segregation, the trial court's award of reimbursement to the district, on the ground that the district's expenditures were mandated by an executive order, from appropriated funds and specified budgets and accounts did not constitute an invasion of the province of the Legislature or a judicial usurpation of the republican form of government guaranteed by U.S. Const., art. IV, § 4, except insofar as it designated the Special Fund for Economic Uncertainties as a source for reimbursement. The specified line item accounts for the Department of Education, the Commission on State Mandates, and the Reserve for Contingencies and Emergencies provided funds for a broad range of activities similar to those specified in the executive order and thus were reasonably

available for reimbursement. However, remand to the trial court was necessary to determine whether these sources contained sufficient unexhausted funds to cover the award.

(18) Constitutional Law § 40--Distribution of Governmental Powers--Judicial Power--Appropriation of Funds. --A court cannot compel the Legislature either to appropriate funds or to pay funds not yet appropriated. However, no violation of the separation of powers doctrine occurs when a court orders appropriate expenditures from already existing funds. The test is whether such funds are reasonably available for the expenditures in question. Funds are "reasonably available" for reimbursement of local government expenditures when the purposes for which those funds were appropriated are generally related to the nature of costs incurred. There is no requirement that the appropriation specifically refer to the particular expenditure, nor must past administrative practice sanction coverage from a particular fund.

(19) Appellate Review § 162--Modification--To Add Charge Order. --An appellate court is empowered to add a directive that a trial court order be modified to include charging orders against funds appropriated by subsequent budgets acts.

(20) Schools § 4--School Districts; Financing; Funds--Reimbursement of State-mandated Costs--Desegregation Expenditures--Effect of Legislative Finding That Costs Not State-mandated. --A school district was entitled to reimbursement pursuant to Cal. Const., art. XIII B, § 6 (reimbursement of local governments for state-mandated costs or increased levels of service), for expenditures related to its efforts to alleviate racial and ethnic segregation in its schools, notwithstanding that after the state Board of Control approved the district's reimbursement claim, the Legislature enacted a "finding" that the executive order requiring the district to undertake desegregation activities did not impose a state-mandated local program. Unsupported legislative disclaimers are insufficient to defeat reimbursement. The district had a constitutional right to reimbursement, and the Legislature could not limit that right.

(21) Schools § 4--School Districts; Financing; Funds--Reimbursement of State-mandated Costs--Desegregation Expenditures--Department of Education Budget as Source. --In an action by a school district against the state to compel the state to reimburse the district for expenditures related to its efforts to alleviate racial and ethnic segregation, the trial court, after finding that the executive order requiring the district to undertake desegregation activities was a reimbursable state mandate, did not err in ordering reimbursement to take place in part from the state Department of Education budget. Logic dictated that department funding be the initial and primary source for reimbursement: given the fact that the executive order was issued by the department, the evidence overwhelmingly supported the trial court's finding of a general relationship between the department budget items and the reimbursable expenditures.

(22) Interest § 8--Rate--Reimbursement of School District's State-mandated Costs. --In an action by a school district against the state to compel the state to reimburse the district for expenditures related to its efforts to alleviate racial and ethnic segregation, the trial court, after finding that the executive order requiring the district to undertake desegregation activities was a reimbursable state mandate, did not err in awarding the district interest at the legal rate (Cal. Const., art. XV, § 1, par. (2)), rather than at the rate of 6 percent per annum pursuant to Gov. Code, § 926.10. Gov. Code, § 926.10, is part of the California Tort Claims Act (Gov. Code, § 900 et seq.), which provides a statutory scheme for the filing of claims against public entities for alleged injuries. It makes no provision for claims for reimbursement for state-mandated expenditures.

(23) Schools § 4--School Districts; Financing; Funds--Reimbursement of State-mandated Costs--Desegregation Expenditures--County Fines and Forfeitures Funds as Source. --In an action by a school district against the state to compel the state to reimburse the district for expenditures related to its efforts to alleviate racial and ethnic segregation, the trial court, after finding that the executive order requiring the district to undertake desegregation activities was a reimbursable state mandate, did not err in determining that moneys in the Fines and Forfeiture Funds in the custody and possession of the county auditor-controller for transfer to the state treasury were not reasonably available for reimbursement purposes. There was no evidence in the record showing the use of those funds once they were transmitted to the state, nor was there any evidence indicating that those funds were then reasonably available to satisfy the district's claim. It could not be concluded as a matter of law that a general relationship existed between the funds and the nature of the costs incurred pursuant to the executive order. Further, there was no ground on which the funds could be made available to the district while in the possession of the auditor-controller.

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JUDGES: Opinion by Lucas, P. J., with Ashby and Boren, JJ., concurring.

OPINION BY: LUCAS

OPINION

[*163] [**454] Introduction

Long Beach Unified School District (LBUSD) filed a claim with the Board of Control of the State of California [***3] (Board), asserting that certain expenditures related to its efforts to alleviate racial and ethnic segregation in its schools had been mandated by the state through regulations (Executive Order) issued by the Department of Education (DOE) and were [*164] reimbursable pursuant to former Revenue and Taxation Code section 2234 and article XIII B, section 6 of the California Constitution. The Board eventually approved the claim and reported to the Legislature its recommendation that funds be appropriated to cover the statewide estimated costs of compliance with the Executive Order. When the Legislature deleted the requested funding from an appropriations bill, LBUSD filed a petition to compel reimbursement (Code Civ. Proc., § 1085) and complaint for declaratory relief. The trial court held that the doctrines of administrative collateral estoppel and waiver prevented the state from challenging the decisions of the Board, and it gave judgment to LBUSD. It also ruled that certain funds previously appropriated by the Legislature were "reasonably available" for reimbursement of the claimed expenditures, subject to audit by the state Controller.

We conclude that the doctrines of collateral [***4] estoppel and waiver are inapplicable to the facts of this case. However, we determine as a question of law that the Executive Order requires local school boards to provide a higher level of service than is required either constitutionally or by case law and that the Executive Order is a reimbursable state mandate pursuant to article XIII B, section 6 of the California Constitution. We also decide that former Revenue and Taxation Code section 2234 does not provide for reimbursement of the claim.

Based on uncontradicted evidence, we modify the decision of the trial court regarding which budget line item account numbers provide "reasonably available" funds to reimburse LBUSD for appropriate expenditures under the claim. We further modify the decision to include charging orders against funds appropriated by subsequent budget acts. Finally, we remand the matter to the trial court to determine whether at the time of its order unexpended, unencumbered funds sufficient to satisfy the judgment remained in the approved budget line item account numbers. The trial court must resolve this same issue with respect to the charging order.

[**455] Background and Procedural History

The California Property [***5] Tax Relief Act of 1972 (Stats. 1972, ch. 1406, § 1, p. 2931) limited the power of local governmental entities to levy property taxes. It also mandated that when the state requires such entities to provide a new program or higher level of service, the state must reimburse those costs. Over time, amendments to the California Constitution and numerous legislative changes impacted both the right and procedure for obtaining reimbursement.

[*165] Sometime prior to September 8, 1977, LBUSD, at its option, voluntarily began to incur substantial costs to alleviate the racial and ethnic segregation of students within its jurisdiction.

On or about the above date, DOE adopted certain regulations which added sections 90 through 101 to title 5 of the California Administrative Code, effective September 16, 1977. We refer to these regulations as the Executive Order.

The Executive Order and related guidelines for implementation required in part that school districts which identified one or more schools as either having or being in danger of having segregation of its minority students "shall, no later than January 1, 1979, and each four years thereafter, develop and adopt a reasonably feasible [***6] plan for the alleviation and prevention of racial and ethnic segregation of minority students in the district."

On or about June 4, 1982, LBUSD submitted a "test claim" (Claim) [1] to the Board for reimbursement of $ 9,050,714 -- the total costs which LBUSD claimed it had incurred during fiscal years 1977-1978 through 1981-1982 for activities required by the Executive Order and guidelines. LBUSD cited former Revenue and Taxation Code section 2234 as authority for the requested reimbursement, asserting that the costs had been "subsequently mandated" by the state. [2]

1 Former Revenue and Taxation Code section 2218 defines "test claim" as "the first claim filed

with the State Board of Control alleging that a particular statute or executive order imposes a mandated cost on such local agency or school district." (Stats. 1980, ch. 1256, § 7, p. 4249.)

2 All statutory references are to the Revenue and Taxation Code unless otherwise stated.

Former section 2234 provided: "If a local agency or a school district, at its option, has been incurring costs which are subsequently mandated by the state, the state shall reimburse the local agency or school district for such costs incurred after the operative date of such mandate." (Stats. 1980, ch. 1256, § 11, pp. 4251-4252.)

[***7] The Board denied the Claim on the grounds that it had no jurisdiction to accept a claim filed under section 2234. LBUSD petitioned superior court for review of the Board decision. (Code Civ. Proc., § 1094.5.) That court concluded the Board had jurisdiction to accept a section 2234 claim and ordered it to hear the matter on its merits. The Board did not appeal this decision.

On February 16, 1984, the Board conducted a hearing to consider the Claim. LBUSD presented written and oral argument that the Claim was reimbursable pursuant to section 2234 and, in addition, under article XIII B, section 6 of the California Constitution. DOE and the State Department [*166] of Finance (Finance) participated in the hearing. [3] The Board concluded that the Executive Order constituted a state mandate. On April 26, 1984, the Board adopted parameters and guidelines proposed by LBUSD for reimbursement of the expenditures. No state entity either sought reconsideration of the Board decisions, [**456] available pursuant to former section 633.6 of the California Administrative Code, [4] or petitioned for judicial review. [5]

3 The DOE recommended that the Claim be denied on the grounds that the requirements of the Executive Order were constitutionally mandated and court ordered and because the Executive Order was effective prior to January 1, 1978 (issues discussed *post*). However, counsel for the DOE expressed dismay that school districts which had voluntarily instituted desegregation programs had been having problems receiving funding from the Legislature, while schools which had been forced to do so had been receiving "substantial amounts of money."

A spokesman from Finance recalled there had been some doubt whether the Board had jurisdiction to hear a 2234 claim. He stated that, assuming the Board did have jurisdiction, the Executive Order contained at least one state mandate, which possibly consisted of administrative kinds of tasks related to the identification of "problem areas and the like."

[***8]

4 Former section 633.6 of the California Administrative Code (now renamed California Code of Regulations) provided in relevant part: "(b) Request for Reconsideration. [para.] (1) A request for reconsideration of a Board determination on a specific test claim . . . shall be filed, in writing, with the Board of Control, no later than ten (10) days after any determination regarding the claim by the Board . . . ." (Title 2, Cal. Admin. Code)

5 Former section 2253.5 provided: "A claimant or the state may commence a proceeding in accordance with the provisions of Section 1094.5 of the Code of Civil Procedure to set aside a decision of the Board of Control on the grounds that the board's decision is not supported by substantial evidence. The court may order the board to hold another hearing regarding such claim and may direct the board on what basis the claim is to receive a rehearing." (Stats. 1978, ch. 794, § 8, p. 2551.)

In December 1984, pursuant to former section 2255, the Board reported to the Legislature the number of mandates it had found and the estimated statewide costs of each mandate. [***9] With respect to the Executive Order mandate, the Board adopted an estimate by Finance that reimbursement of school districts, including LBUSD, for costs expended in compliance with the Executive Order would total $ 95 million for fiscal years 1977-1978 through 1984-1985. The Board recommended that the Legislature appropriate that amount.

Effective January 1, 1985, the Commission on State Mandates (Commission) succeeded to the functions of the Board. (Gov. Code, §§ 17525, 17630.)

On March 4, 1985, Assembly Bill No. 1301 was introduced. It included an appropriation of $ 95 million to the state controller "for payment of claims of school districts seeking reimbursable state-mandated costs incurred pursuant to [the Executive Order] . . . ." On June 27, the Assembly amended the bill by deleting this $ 95 million appropriation and adding a [*167] "finding" that the Executive Order did not impose a state-mandated local program. [6] On September 28, 1985, the Governor approved the bill as amended.

6 Former Section 2255 provided in part: "(b) If the Legislature deletes from a local government claims bill funding for a mandate imposed either by legislation or by a regulation . . . , it may take one of the following courses of action: (1) In-

clude a finding that the legislation or regulation does not contain a mandate . . . ." (Stats. 1982, ch. 1638, § 7, p. 6662.)

[***10] On June 26, 1986, LBUSD petitioned for writ of mandate (Code Civ. Proc., § 1085) and filed a complaint for declaratory relief against defendants State of California; Commission; Finance; DOE; holders of the offices of State Controller and State Treasurer and holder of the office of Auditor-Controller of the County of Los Angeles, and their successors in interest. LBUSD requested issuance of a writ of mandate commanding the respondents to comply with section 2234 (fn. 2, *ante*) [7] and, in an amended petition, its successor, Government Code section 17565, and with California Constitution, article XIII B, section 6. [8] It further requested respondents to reimburse LBUSD $ 24,164,593 for fiscal years 1977-1978 through 1982-1983, $ 3,850,276 for fiscal years 1983-1984 and 1984-1985, and accrued interest, for activities mandated by the Executive Order.

7 The language of Government Code section 17565 is nearly identical to that of section 2234 (fn. 2, *ante*), and provides: "If a local agency or a school district, at its option, has been incurring costs which are subsequently mandated by the state, the state shall reimburse the local agency or school district for those costs incurred after the operative date of the mandate." (Stats. 1986, ch. 879, § 10, p. 3043.)

[***11]

8 Article XIII B, section 6 provides in pertinent part: "Whenever the Legislature or any state agency mandates a new program or higher level of service on any local government, the state shall provide a subvention of funds to reimburse such local government for the costs of such program or increased level of service . . . ."

The trial court let stand the conclusion of the Board that the Executive Order constituted a reimbursable state mandate and ruled in favor of LBUSD. No party requested a statement of decision.

The judgment stated that the Executive Order constituted a reimbursable state mandate which state entities could not challenge because of the doctrines of administrative collateral estoppel and waiver. It provided that certain previously appropriated [**457] funds were "'reasonably available'" to reimburse LBUSD for its claimed expenditures, applicable interest, and court costs. The judgment also stated that funds denominated the "Fines and Forfeitures Funds," under the custody of the Auditor-Controller of the County of Los Angeles, were not reasonably available. The judgment further decreed [***12] that the State Controller retained the right to audit the claims and records of LBUSD to verify the amount of the reimbursement award sum.

[*168] State respondents (State) and DOE separately filed timely notices of appeal, and LBUSD cross-appealed. [9]

9 Although an "Amended Notice to Prepare Clerk's Transcript" filed by DOE on April 11, 1988, requests the clerk of the superior court to incorporate in the record its notice of appeal filed April 1, 1988, this latter document does not appear in the record before us, and the original apparently is lost within the court system. Respondent LBUSD received a copy of the notice on April 4, 1988.

Discussion

State asserts that neither the doctrine of collateral estoppel nor the doctrine of waiver is applicable to this case, the costs incurred by LBUSD are not reimbursable, and the remedy authorized by the trial court is inconsistent with California law and invades the province of the Legislature, a violation of article IV, section 4 of the United States Constitution.

The [***13] thrust of the DOE appeal is that its budget is not an appropriate source of funding for the reimbursement.

LBUSD has argued in its cross-appeal that an additional source of funding, the "Fines and Forfeiture Funds," should be made available for reimbursement of its costs and, in supplementary briefing, requests this court to order a modification of the judgment to include as "reasonably available funding" specific line item accounts from the 1988-1989 and 1989-1990 state budgets.

I. State Not Barred From Challenging Decisions of the Board

A. Administrative Collateral Estoppel

(1a) State first contends that the doctrine of administrative collateral estoppel is not applicable to the facts of this case and does not prevent State from litigating whether the Board properly considered the subject claim and whether the claim is reimbursable.

(2) [HN1]Collateral estoppel precludes a party from relitigating in a subsequent action matters previously litigated and determined. (*Teitelbaum Furs, Inc. v. Dominion Ins. Co., Ltd.* (1962) 58 Cal.2d 601, 604 [25 Cal.Rptr. 559, 375 P.2d 439].) The traditional elements of collateral estoppel include the requirement [***14] that the prior judgment be "final." (*Ibid.*)

(3a) [HN2]Finality for the purposes of administrative collateral estoppel may be understood as a two-step process: (1) the decision must be final with [*169] respect to action by the administrative agency (see Code Civ. Proc., § 1094.5, subd. (a)); and (2) the decision must have conclusive effect (*Sandoval* v. *Superior Court* (1983) 140 Cal.App.3d 932, 936-937 [190 Cal.Rptr. 29]).

A decision attains the requisite administrative finality when the agency has exhausted its jurisdiction and possesses "no further power to reconsider or rehear the claim. [Fn. omitted.]" (*Chas. L. Harney, Inc.* v. *State of California* (1963) 217 Cal.App.2d 77, 98 [31 Cal.Rptr. 524].)

(1b) In the case at bar, former section 633.6 of the Administrative Code provided a 10-day period during which any party could request reconsideration of any Board determination (fn. 4, *ante*). The Board decided on February 16, 1984, that the Executive Order constituted a state mandate, and on April 26, 1984, it adopted parameters and guidelines for the reimbursement of the claimed expenditures. No party requested [***15] reconsideration, no statute or regulation provided for further consideration of the matter by the Board (see, e.g., *Olive Proration etc. Com.* v. *Agri. etc. Com.* (1941) 17 Cal.2d 204, 209 [109 P.2d 918]), and the decisions became administratively final on February [**458] 27, 1984, and May 7, 1984, respectively [10] (*Ziganto* v. *Taylor* (1961) 198 Cal.App.2d 603, 607 [18 Cal.Rptr. 229]).

10 We take judicial notice pursuant to Evidence Code section 452, subdivision (h), that February 26, 1984, and May 6, 1984, fall on Sundays.

(3b) Next, the decision must have conclusive effect. (*Sandoval* v. *Superior Court, supra*, 140 Cal.App.3d 932, 936-937.) In other words, the decision must be free from direct attack. (*People* v. *Sims* (1982) 32 Cal.3d 468, 486 [186 Cal.Rptr. 77, 651 P.2d 321].) A direct attack on an administrative decision may be made by appeal to the superior court for review [***16] by petition for administrative mandamus. (Code Civ. Proc., § 1094.5.)

(1c) A decision will not be given collateral estoppel effect if such appeal has been taken or if the time for such appeal has not lapsed. (*Sandoval* v. *Superior Court, supra*, 140 Cal.App.3d at pp. 936-937; *Producers Dairy Delivery Co.* v. *Sentry Ins. Co.* (1986) 41 Cal.3d 903, 911 [226 Cal.Rptr. 558, 718 P.2d 920].) The applicable statute of limitations for such review in the case at bar is three years. (*Carmel Valley Fire Protection Dist.* v. *State of California* (1987) 190 Cal.App.3d 521, 534 [234 Cal.Rptr. 795]; *Green* v. *Obledo* (1981) 29 Cal.3d 126, 141, fn. 10 [172 Cal.Rptr. 206, 624 P.2d 256].)

(4) A statute of limitations commences to run at the point where a cause of action accrues and a suit may be maintained thereon. (*Dillon* v. *Board of Pension Comm'rs.* (1941) 18 Cal.2d 427, 430 [116 P.2d 37, 136 A.L.R. 800].)

(1d) In the instant case, State's causes of action accrued when the Board made the two decisions [***17] adverse to State on February 16 and April 26, 1984, [*170] as discussed. State did not request reconsideration, and the decisions became administratively final on February 27 and May 7, 1984. [11] For purposes of discussion, we will assume the applicable three-year statute of limitations period for the two Board decisions commenced on February 28 and May 8, 1984, and ended on February 28 and May 8, 1987. [12] LBUSD filed its petition for ordinary mandamus (Code Civ. Proc., § 1085) and complaint for declaratory relief on June 26, 1986. At that point, the limitations periods had not run against State and the Board decisions lacked the necessary finality to satisfy that requirement of the doctrine of administrative collateral estoppel. [13]

11 We do not address the contention of LBUSD that State failed to exhaust its administrative remedies (*Abelleira* v. *District Court of Appeal* (1941) 17 Cal.2d 280, 292 [109 P.2d 942, 132 A.L.R. 715]; *Morton* v. *Superior Court* (1970) 9 Cal.App.3d 977, 982 [88 Cal.Rptr. 533]) and therefore State cannot assert its affirmative defenses in response to the petition and complaint of the school district. Traditionally, the doctrine has been raised as a bar only with respect to the party seeking judicial relief, not against the responding party (*ibid.*); we have found no case holding otherwise.

[***18]

12 If State had sought reconsideration and its request been denied, or if its request had been granted but the matter again decided in favor of LBUSD, the Board decision would have been final 10 days after the Board action, and at that point the statute would have commenced to run against State.

13 State argues that its statute of limitations did not commence until the legislation was enacted without the appropriation (Sept. 28, 1985), citing *Carmel Valley Fire Protection Dist.* v. *State of California, supra*, 190 Cal.App.3d at page 548. However, *Carmel Valley* held that the *claimant* does not exhaust its administrative remedies and cannot come under the court's jurisdiction until

the legislative process is complete, which occurred in that case when the legislation was enacted without the subject appropriations. At that point, *Carmel Valley* reasoned, the state had breached its duty to reimburse, and the claimant's right of action in traditional mandamus accrued. (*Ibid.*) However, *Carmel Valley* decided, as do we in the case at bar, that the state's statute of limitations commenced on the date the Board made decisions adverse to its interests. (*Id.* at p. 534.)

In addition, we see no reason to permit State to rely on the fortuitous actions of the Legislature, an independent branch of government, to bail it out of obligations established in the distant past by state agents -- especially given the lengthy three-year statute of limitations. (Compare, e.g., Gov. Code, § 11523 [mandatory time limit within which to petition for administrative mandamus can be 30 days after last day on which administrative reconsideration can be ordered]; Lab. Code, § 1160.8, and *Jackson & Perkins Co. v. Agricultural Labor Relations Board* (1978) 77 Cal.App.3d 830, 834 [144 Cal.Rptr. 166] [30 days from issuance of board order even if party has filed a motion to reconsider].)

[***19] [**459] *B. Waiver*

(5a) State also asserts that the doctrine of waiver is not applicable.

(6) [HN3]A waiver occurs when there is "an existing right; actual or constructive knowledge of its existence; and either an actual intention to relinquish it, or conduct so inconsistent with an intent to enforce the right as to induce [*171] a reasonable belief that it has been waived. [Citations.]" (*Carmel Valley Fire Protection Dist. v. State of California, supra,* 190 Cal.App.3d at p. 534.) Ordinarily, the issue of waiver is a question of fact which is binding on the appellate court if the determination is supported by substantial evidence. (*Napa Association of Public Employees v. County of Napa* (1979) 98 Cal.App.3d 263, 268 [159 Cal.Rptr. 522].) However, the question is one of law when the evidence is not in conflict and is susceptible of only one reasonable inference. (*Glendale Fed. Sav. & Loan Assn. v. Marina View Heights Dev. Co.* (1977) 66 Cal.App.3d 101, 151-152 [135 Cal.Rptr. 802].)

(5b) In the instant case, the right to contest the findings of the Board is at issue, and there is no dispute that [***20] the state was aware of the existence of this right. As discussed, the statute of limitations had not run when State raised its affirmative defenses, and during this time State could have filed a separate petition for administrative mandamus.

(7) (See fn. 14.)

(5c) State's assertion of its affirmative defenses during this period is inconsistent with an intent to waive its right to contest the Board decisions, and therefore the doctrine of waiver is not applicable. [14]

14 LBUSD contends that State should be equitably estopped from challenging the Board decisions. In the absence of a confidential relationship, the doctrine of equitable estoppel is inapplicable where there is a mistake of law. (*Gilbert v. City of Martinez* (1957) 152 Cal.App.2d 374, 378 [313 P.2d 139]; *People v. Stuyvesant Ins. Co.* (1968) 261 Cal.App.2d 773, 784 [68 Cal.Rptr. 389].) There is no confidential relationship herein, and since we conclude as a matter of law and contrary to the trial court that the statute of limitations does not bar State from litigating the mandate and reimbursability issues, the doctrine is inapplicable.

[***21] *II. Issue of State Mandate*

(8) Ordinarily, our conclusion that the trial court erred in failing to consider the merits of the State's challenge to the decisions of the Board would require that the matter be remanded to the trial court for a full hearing. However, because the question of whether a cost is state mandated is one of law in the instant case (cf. *Carmel Valley Fire Protection Dist. v. State of California, supra,* 190 Cal.App.3d at p. 536), we now decide that the expenditures are reimbursable pursuant to article XIII B, section 6 of the California Constitution and that no relief is available under section 2234. [15]

15 We invited State, DOE, and LBUSD to submit additional briefing on the following issues: "1. Can it be determined as a question of law whether sections 90 through 101 of Title 5 of the California Administrative Code [Executive Order] constitute a state mandate within the meaning of article XIII B, section 6 of the California Constitution? 2. Do the above sections constitute such mandate?" State and LBUSD submitted additional argument; DOE declined the invitation.

[***22] [*172] *A. Recovery Under Article XIII B, Section 6*

(9a) On November 6, 1979, California voters passed initiative measure Proposition 4, which added article XIII B to the state Constitution. This measure, a corollary to the previously passed Proposition 13 (art. XIII A, which restricts governmental taxing authority), placed limits on the growth of state and local government appropriations. It also provided reimbursement to local governments for the costs of complying with certain requirements mandated by the state. LBUSD argues that section 6 of this provision is an additional ground for reimbursement.

1. The Executive Order Requires a Higher Level of Service

In relevant part article XIII B, section 6 (Section 6) provides: [HN4]"Whenever the Legislature or any state agency mandates a new program or higher level of service on any [**460] local government, the state shall provide a subvention of funds to reimburse such local government for the costs of such program or increased level of service . . . ."

(10) The subvention requirement of Section 6 "is directed to state mandated increases in the services provided by local agencies in existing 'programs.'" (*County of Los Angeles* v. *State of California* (1987) 43 Cal.3d 46, 56 [233 Cal.Rptr. 38, 729 P.2d 202].) [***23] "[T]he drafters and the electorate had in mind the commonly understood meanings of the term -- programs that carry out the governmental function of providing services to the public, or laws which, to implement a state policy, impose unique requirements on local governments and do not apply generally to all residents and entities in the state." (*Ibid.*)

(9b) In the instant case, although numerous private schools exist, education in our society is considered to be a peculiarly governmental function. (Cf. *Carmel Valley Fire Protection Dist.* v. *State of California, supra,* 190 Cal.App.3d at p. 537.) Further, public education is administered by local agencies to provide service to the public. Thus public education constitutes a "program" within the meaning of Section 6.

State argues that the Executive Order does not mandate a higher level of service -- or a new program -- because school districts in California have a constitutional duty to make an effort to eliminate racial segregation in the public schools. In support of its argument, State cites *Brown* v. *Board of Education* (1952) 347 U.S. 483, 495 [98 L.Ed. 873, 881, 74 S.Ct. 686, 38 A.L.R.2d 1180]; [***24] *Jackson* v. *Pasadena City School District* (1963) 59 Cal.2d 876, 881 [31 Cal.Rptr. 606, 382 P.2d 878]; *Crawford* v. *Board of Education* (1976) 17 Cal.3d 280 [130 Cal.Rptr. 724, 551 P.2d 28] and cases cited therein; and *National Assn. for Advancement of Colored People* v. *San Bernardino* [*173] *City Unified Sch. Dist.* (1976) 17 Cal.3d 311 [130 Cal.Rptr. 744, 551 P.2d 48]. These cases show that school districts do indeed have a constitutional obligation to alleviate racial segregation, and on this ground the Executive Order does not constitute a "new program." However, although school districts are required to "'take steps, insofar as reasonably feasible, to alleviate racial imbalance in schools regardless of its cause[]'" (*Crawford, supra,* at p. 305, italics omitted, citing *Jackson*), the courts have been wary of requiring specific steps in advance of a demonstrated need for intervention (*Crawford,* at pp. 305-306; *Jackson, supra,* at pp. 881-882; *Swann* v. *Board of Education* (1971) 402 U.S. 1, 18-21 [28 L.Ed.2d 554, 567-570, 91 S.Ct. 1267]). [***25] On the other hand, courts have required specific factors be considered in determining whether a school is segregated (*Keyes* v. *School District No. 1, Denver, Colo.* (1973) 413 U.S. 189, 202-203 [37 L.Ed.2d 548, 559-560, 93 S.Ct. 2686]; *Jackson, supra,* at p. 882).

The phrase "higher level of service" is not defined in article XIII B or in the ballot materials. (*County of Los Angeles* v. *State of California, supra,* 43 Cal.3d 46, 50.) A mere increase in the cost of providing a service which is the result of a requirement mandated by the state is not tantamount to a higher level of service. (*Id.,* at pp. 54-56.) However, a review of the Executive Order and guidelines shows that a higher level of service is mandated because their requirements go beyond constitutional and case law requirements. Where courts have *suggested* that certain steps and approaches may be helpful, the Executive Order and guidelines *require* specific actions. For example, school districts are to conduct mandatory biennial [***26] racial and ethnic surveys, develop a "reasonably feasible" plan every four years to alleviate and prevent segregation, include certain specific elements in each plan, and take mandatory steps to involve the community, including public hearings which have been advertised in a specific manner. While all these steps fit within the "reasonably feasible" description of *Jackson* and *Crawford*, the point is that these steps are no longer merely being suggested as options which the local school district may [**461] wish to consider but are required acts. These requirements constitute a higher level of service. We are supported in our conclusion by the report of the Board to the Legislature regarding its decision that the Claim is reimbursable: "[O]nly those costs that are above and beyond the regular level of service for like pupils in the district are reimbursable."

2. The Executive Order Constitutes a State Mandate

For the sake of clarity we quote Section 6 in full: "Whenever the Legislature or any state agency mandates a new program or higher level of service on any local government, the state shall provide a subvention of funds to [*174] reimburse such local government for the [***27] costs of such program or increased level of service, except that the Legislature may, but need not, provide such subvention of funds for the following mandates: [para.] (a) Legislative mandates requested by the local agency affected; [para.] (b) Legislation defining a new crime or changing an existing definition of a crime; or [para.] *(c) Legislative mandates enacted prior to January 1, 1975, or executive orders or regulations initially implementing legislation enacted prior to January 1, 1975.*" (Italics added.) This amendment became effective July 1, 1980. (Art. XIII B, § 10.) Again, the Executive Order became effective September 16, 1977.

State argues there is no constitutional ground for reimbursement because (a) with reference to the language of exception (c) of Section 6, the Executive Order is neither a statute nor an executive order or regulation implementing a statute; (b) recent legislation limits reimbursement to certain costs incurred after July 1, 1980, the effective date of the constitutional amendment; and (c) LBUSD failed to exhaust administrative procedures for reimbursement of Section 6 claims (Gov. Code, § 17500 et seq.). We conclude that recovery is available [***28] under Section 6.

(a) *Form of Mandate*

State argues the Executive Order is not a state mandate because, with reference to exception (c) of Section 6, it is neither a statute nor an executive order implementing a statute.

(11) [HN5]In construing the meaning of Section 6, we must determine the intent of the voters by first looking to the language itself (*County of Los Angeles* v. *State of California, supra,* 43 Cal.3d 46, 56), which "'should be construed in accordance with the natural and ordinary meaning of its words.' [Citation.]" (*ITT World Communications, Inc.* v. *City and County of San Francisco* (1985) 37 Cal.3d 859, 865 [210 Cal.Rptr. 226, 693 P.2d 811].) The main provision of Section 6 states that whenever the Legislature or any state agency "mandates" a new program or higher level of service, the state must provide reimbursement.

(12) We understand the use of "mandates" in the ordinary sense of "orders" or "commands," concepts broad enough to include executive orders as well as statutes. As has been noted, "[t]he concern which prompted the inclusion of section 6 in article XIII B was the perceived [***29] attempt by the state to enact legislation *or adopt administrative orders* creating programs to be administered by local agencies, thereby transferring to those agencies the fiscal responsibility for providing services which the state believed should be extended to the public." (*County of Los Angeles* v. *State of California, supra,* 43 Cal.3d at p. 56.) It is clear that the primary concern of the voters was the increased financial [*175] burdens being shifted to local government, not the form in which those burdens appeared.

We derive support for our interpretation by reference to the ballot summary presented to the electorate. (Cf. *Amador Valley Joint Union High Sch. Dist.* v. *State Bd. of Equalization* (1978) 22 Cal.3d 208, 245-246 [149 Cal.Rptr. 239, 583 P.2d 1281].) The legislative analyst determined that the amendment would limit the rate of growth of governmental appropriations, require the return of taxes which exceeded amounts appropriated, and "[r]equire the state to reimburse local governments for the costs of complying with 'state mandates.'" [**462] The term "state mandates" was [***30] defined as "requirements imposed on local governments by legislation *or executive orders.*" (Italics added; Ballot Pamp., Proposed Amend. to Cal. Const. with arguments to voters, Special Statewide Elec. (Nov. 6, 1979) p. 16.)

(9c) Although exception (c) of Section 6 gives the state discretion whether to reimburse pre-1975 mandates which are either statutes or executive orders implementing statutes, we do not infer from this exception that reimbursability is otherwise dependent on the form of the mandate. We conclude that since the voters provided for mandatory reimbursement except for the three narrowly drawn exceptions found in (a), (b), and (c), there was no intent to exclude recovery for state mandates in the form of executive orders. Further, as State sets forth in its brief, the adoption of the Executive Order was "arguably prompted" by the decision in *Crawford* v. *Board of Education, supra,* 17 Cal.3d 280, a case decided after the 1975 cutoff date of exception (c). Since case law and statutory law are of equal force, there appears to be no basis on which to exclude executive orders which implement case law or constitutional law [***31] while permitting reimbursement for executive orders implementing statutes. We see no relationship between the proposed distinction and the described purposes of the amendment (*County Los Angeles* v. *State of California, supra,* 43 Cal.3d at p. 56; *County of Los Angeles* v. *Department of Industrial Relations* (1989) 214 Cal.App.3d 1538, 1545 [263 Cal.Rptr. 351]).

(b) *Recent Legislative Limits*

State contends that LBUSD cannot claim reimbursement under Section 6 because Government Code sections 17561 (Stats. 1986, ch. 879, § 6, p. 3041) and

17514 (Stats. 1984, ch. 1459, § 1, p. 5114) limit such recovery to mandates created by statutes or executive orders implementing statutes, and only for costs incurred after July 1, 1980.

As discussed above, the voters did not intend to limit reimbursement of costs only to those incurred pursuant to statutes or executive orders implementing [*176] statutes except as set forth in exception (c) of Section 6. We presume that when the Legislature passed Government Code sections 17561 and 17514 it was aware of Section 6 as a related law and intended to maintain a consistent [***32] body of rules. (*Fuentes* v. *Workers' Comp. Appeals Bd.* (1976) 16 Cal.3d 1, 7 [128 Cal.Rptr. 673, 547 P.2d 449].) As discussed above, the limitations suggested by State are confined to exception (c).

Further, the state must reimburse costs incurred pursuant to mandates enacted after January 1, 1975, although actual payments for reimbursement were not required to be made prior to July 1, 1980, the effective date of Section 6. (*Carmel Valley Fire Protection Dist.* v. *State of California, supra*, 190 Cal.App.3d at pp. 547-548; *City of Sacramento* v. *State of California* (1984) 156 Cal.App.3d 182, 191-194 [203 Cal.Rptr. 258], disapproved on other grounds in *County of Los Angeles* v. *State of California, supra*, 43 Cal.3d at p. 58, fn. 10.)

(c) *Administrative Procedures*

The Legislature passed Government Code section 17500 et seq. (Stats. 1984, ch. 1459, § 1, p. 5113), effective January 1, 1985 (Stats. 1984, ch. 1459, § 1, p. 5123), to aid the implementation of Section 6 and to consolidate the procedures for reimbursement [***33] under statutes found in the Revenue and Taxation Code. This legislation created the Commission, which replaced the Board, and instituted a number of procedural changes. (Gov. Code, §§ 17525, 17527, subd. (g), 17550 et seq.) The Legislature intended the new system to provide "the sole and exclusive procedure by which a local agency or school district" could claim reimbursement. (Gov. Code, § 17552.)

(13) State argues that since LBUSD never made its claim before the Commission, it failed to exhaust its administrative [**463] remedies and cannot now receive reimbursement under section 6.

As discussed, the Board decisions favorable to LBUSD became administratively final in 1984. The Commission was not in place until January 1, 1985. There is no evidence in the record that the Commission did not consider these decisions to be final.

State argues the Commission was given jurisdiction over all claims which had not been included in a local government claims bill enacted before January 1, 1985. (Gov. Code, § 17630.) State is correct. However, the subject claim was included in such a bill, but the bill was signed into law after the recommended appropriation had been deleted. Under the statutory [***34] scheme, the only relief offered a disappointed claimant at such juncture is an action in declaratory relief to declare a subject executive order void [*177] (former Rev. & Tax Code, § 2255, subd. (c); Stats. 1982, ch. 1638, § 7, pp. 6662-6663) or unenforceable (Gov. Code, § 17612, subd. (b); Stats. 1984, ch. 1459, § 1, p. 5121) and to enjoin its enforcement. LBUSD pursued this remedy and in addition petitioned for writ of mandate (Code Civ. Proc., § 1085) to compel reimbursement. There is no requirement to seek further administrative review. Indeed, to do so after the Legislature has spoken would appear to be an exercise in futility.

We conclude that Section 6 provides reimbursement to LBUSD because the Executive Order required a higher level of service and because the Executive Order constitutes a state mandate.

B. Section 2234

As set forth in the procedural history of this case, the Board originally declined to consider the Claim as a claim made under section 2234 on the ground that it lacked jurisdiction to do so. LBUSD petitioned for judicial relief, and the trial court held that the Board had jurisdiction and must consider the claim on its merits. The Board did not [***35] appeal that decision. State raised the jurisdiction issue as an affirmative defense to the second petition for writ of mandate filed by LBUSD and presents it again for our consideration.

(14) Of course, [HN6]lack of subject matter jurisdiction may be raised at any time. (*Stuck* v. *Board of Medical Examiners* (1949) 94 Cal.App.2d 751, 755 [211 P.2d 389].)

Former section 2250 provided: "The State Board of Control, pursuant to the provisions of this article, shall hear and decide upon a claim by a local agency or school district that such local agency or school district has not been reimbursed for *all costs mandated by the state as required by Section 2231 or 2234*. [para.] Notwithstanding any other provision of law, this article shall provide the sole and exclusive procedure by which the Board of Control shall hear and decide upon a claim that a local agency or school district has not been reimbursed for *all costs mandated by the state as required by Section 2231 or 2234*." (Italics added; Stats. 1978, ch. 794, § 5, p. 2549.) Given the clear, unambiguous language of the statute, there is no need for construction. (*West Covina Hospital* v. *Superior Court* (1986) 41 Cal.3d 846, 850 [226 Cal.Rptr. 132, 718 P.2d 119, 60 A.L.R.4th 1257].)

[***36] **(15a)** We conclude that the Board had jurisdiction to consider a claim filed under former section 2234. However, as discussed below, the 1977 Executive Order falls outside the purview of section 2234.

Former section 2231 provided: "(a) . . . The state shall reimburse each school district only for those 'costs mandated by the state', as defined in [*178] Section 2207.5." (Stats. 1982, ch. 1586, § 3, p. 6264.) In part, former section 2207.5 defines "costs mandated by the state" as increased costs which a school district is required to incur as a result of certain new programs or certain increased program levels or services mandated by an executive order issued *after* January 1, 1978. (Stats. 1980, ch. 1256, § 5, pp. 4248-4249.) As previously stated, the Executive Order in the case at bar was issued September 8, 1977.

Former section 2234, pursuant to which LBUSD initially filed its claim, does not itself contain language indicating a time limitation: "If a local agency or a school district, at its option, has been incurring costs which are subsequently mandated by the state, the state shall reimburse the [**464] local agency or school district for such costs incurred after the operative [***37] date of such mandate." (Stats. 1980, ch. 1256, § 11, p. 4251.)

State asserts that the January 1, 1978, limitation of sections 2231 and 2207.5 applies to section 2234, preventing reimbursement for costs expended pursuant to the September 8, 1977, Executive Order; LBUSD argues section 2234 is self-contained and without time limitation.

(16) It is a fundamental rule of statutory construction that [HN7]a statute should be construed with reference to the whole system of law of which it is a part in order to ascertain the intent of the Legislature. (*Moore* v. *Panish* (1982) 32 Cal.3d 535, 541 [186 Cal.Rptr. 475, 652 P.2d 32]; *Pitman* v. *City of Oakland* (1988) 197 Cal.App.3d 1037, 1042 [243 Cal.Rptr. 306].) The legislative history of a statute may be considered in ascertaining legislative design. (*Walters* v. *Weed* (1988) 45 Cal.3d 1, 10 [246 Cal.Rptr. 5, 752 P.2d 443].)

The earliest version of section 2234 is found in former section 2164.3, subdivision (f), which provided reimbursement to a city, county, or special district for "a service or program [provided] at its [***38] option which is subsequently mandated by the state . . . ." Reimbursement was limited to costs mandated by statutes or executive orders enacted or issued after January 1, 1973. (Stats. 1972, ch. 1406, § 3, pp. 2962-2963.)

In 1973, section 2164.3 was amended to provide reimbursement to school districts for costs mandated by statutes enacted after January 1, 1973 (subd. (a)), *but it expressly excluded school districts from reimbursement for costs mandated by executive orders* (subd. (d)). (Stats. 1973, ch. 208, § 51, p. 565.) Later that same year, the Legislature repealed section 2164.3 (Stats. 1973, ch. 358, § 2, p. 779) and added section 2231, which took over the pertinent [*179] reimbursement provisions of section 2164.3 virtually unchanged. (Stats. 1973, ch. 358, § 3, pp. 779, 783-784.)

In 1975, the Legislature removed the time limitation language from section 2231 and incorporated it into a new section, 2207. (Stats. 1975, ch. 486, § 1.8, pp. 997-998.) After this change, section 2231 then provided in pertinent part: "(a) The state shall reimburse each local agency for all 'costs mandated by the state', as defined in Section 2207. *The state shall reimburse each school* [***39] *district only for those 'costs mandated by the state' specified in subdivision (a) of Section 2207 . . . .*" (Italics added; Stats. 1975, ch. 486, § 7, pp. 999-1000.) Subdivision (a) of section 2207 limited reimbursement solely to costs mandated by statutes enacted after January 1, 1973.

At this same juncture, the Legislature further amended section 2231 by deleting the provision for "subsequently mandated" services or programs and incorporating that provision into a new section, 2234 (Stats. 1975, ch. 486, § 9, p. 1000), the section under which LBUSD would eventually make its claim. The substance of section 2234 (see fn. 2, *ante*) remained unchanged until its repeal in 1986. (Stats. 1977, ch. 1135, § 8.6, p. 3648; Stats. 1980, ch. 1256, § 11, pp. 4251-4252; Stats. 1986, ch. 879, § 25, p. 3045.)

Next, section 2231 was amended to show that with regard to school districts, "costs mandated by the state" were now defined by a new section, 2207.5. (Stats. 1977, ch. 1135, § 7, pp. 3647-3648.) Section 2207.5 limited reimbursement to costs mandated by statutes enacted after January 1, 1973, and *executive orders issued after January 1, 1978*. (Stats. 1977, ch. 1135, § 5, pp. [***40] 3646-3647.) (No further pertinent amendments to section 2231 occurred; see Stats. 1978, ch. 794, § 1.1, p. 2546; Stats. 1980, ch. 1256, § 8, pp. 4249-4250; Stats. 1982, ch. 734, § 3, p. 2912.) The distinction between statutes and executive orders was preserved when section 2207.5 was amended in 1980 (Stats. 1980, ch. 1256, § 5, pp. 4248-4249) and was in effect at the time of the Board hearing.

(15b) This survey teaches us that with respect to the reimbursement process, the Legislature has treated school districts differently than it has treated other local government entities. The Legislature initially did not

give school districts the right to recover costs mandated by executive orders; and when this option was made available, the [**465] effective date differed from that applicable to other entities. The Legislature consistently limited reimbursement of costs by reference to the effective dates of statutes and executive orders and nothing indicates the state intended recovery of costs to be open-ended.

[*180] Because the "subsequently mandated" provision of section 2234 originally was contained in sections which set forth specific date limitations (former sections 2164.3 and 2231), we conclude [***41] the Legislature likewise intended to limit claims made pursuant to section 2234. The use of the language "subsequently mandated" merely describes an additional circumstance in which the state will reimburse costs, provided the claimant meets other requirements. Since the September 1977 Executive Order falls outside the January 1, 1978, limit set by section 2207.5, section 2234 does not provide for reimbursement to LBUSD.

III. The Award

The full text of the award as provided by the judgment is set forth in an appendix to this opinion. In part, the judgment states that there are appropriated funds in budgets for the DOE, the Commission, the Reserve for Contingencies or Emergencies, and the Special Fund for Economic Uncertainties, "or similarly designated accounts" which are "'reasonably available'" to reimburse LBUSD for the state mandated costs it has incurred. (Appendix, pars. 3, 2.) The State Controller is commanded to pay the claims plus interest "at the legal rate" from the described appropriations for fiscal years 1984-1985 through 1987-1988 and "subsequently enacted State Budget Acts." (Appendix, par. 7.) The judgment declares that the deletion of funding for reimbursement [***42] of costs incurred in compliance with the Executive Order was invalid and unconstitutional. (Appendix, par. 12.) Finally, the Fines and Forfeiture Funds in the custody of the Auditor-Controller of Los Angeles County are held to be not reasonably available for reimbursement. (Appendix, par. 5.)

A. State Position

(17a) State contends the trial court's award is contrary to California law, asserting that it constitutes an invasion of the province of the Legislature and therefore a judicial usurpation of the republican form of government guaranteed by the United States Constitution, Article IV, section 4.

(18) [HN8]A court cannot compel the Legislature either to appropriate funds or to pay funds not yet appropriated. (Cal. Const., art. III, § 3; art. XVI, § 7; *Mandel* v. *Myers* (1981) 29 Cal.3d 531, 540 [174 Cal.Rptr. 841, 629 P.2d 935]; *Carmel Valley Fire Protection Dist.* v. *State of California, supra*, 190 Cal.App.3d at p. 538.) However, no violation of the separation of powers doctrine occurs when a court orders appropriate expenditures from already existing funds. (*Mandel*, at p. 540; *Carmel Valley*, at [***43] pp. 539-540.) The test is whether such funds are "reasonably available for the [*181] expenditures in question . . . ." (*Mandel*, at p. 542; *Carmel Valley*, at pp. 540-541.) Funds are "reasonably available" for reimbursement when the purposes for which those funds were appropriated are "generally related to the nature of costs incurred . . . ." (*Carmel Valley*, at p. 541.) There is no requirement that the appropriation specifically refer to the particular expenditure (*Mandel* at pp. 543-544, *Carmel Valley* at pp. 540; *Committee to Defend Reproductive Rights* v. *Cory* (1982) 132 Cal.App.3d 852, 857-858 [183 Cal.Rptr. 475]), nor must past administrative practice sanction coverage from a particular fund (*Carmel Valley*, at p. 540).

(17b) As previously stated, the trial court found the subject funds were "reasonably available." No party requested a statement of decision, and therefore it is implied that the trial court found all facts necessary to support its judgment. (*Michael* [**466] *U.* v. *Jamie B.* (1985) 39 Cal.3d 787, 792-793 [218 Cal.Rptr. 39, 705 P.2d 362]; *Homestead Supplies, Inc.* v. *Executive Life Ins. Co.* (1978) 81 Cal.App.3d 978, 984 [147 Cal.Rptr. 22].) [***44] We now examine the record to ascertain whether substantial evidence supports the decision of the trial court.

The Board having approved reimbursement under the Executive Order, reported to the Legislature that "[t]he categories of reimbursable costs include, but are not limited to: (1) voluntary pupil assignment or reassignment programs, (2) magnet schools or centers, (3) transportation of pupils to alternative schools or programs, (5) [*sic*, no item (4)] racially isolated minority schools, (6) costs of planning, recruiting, administration and/or evaluation, and (7) overhead costs." The guidelines set out comprehensive steps to be taken by school districts in order to be in compliance with the Executive Order.

The peremptory writ of mandate, issued the same date as the judgment, designated funds in specific account numbers and, in addition, a special fund as available for reimbursement. We take judicial notice of the relevant budget enactments and Government Code sec-

tions 16418 and 16419 (Evid. Code, §§ 459, subd. (a), 452) and address these designations seriatim.

The line item account numbers for the DOE for fiscal years 1984-1985 through 1987-1988 set forth in the writ are [***45] as follows: 6100-001-001, 6100-001-178, 6100-015-001, 6100-101-001, 6100-114-001, 6100-115-001, 6100-121-001, 6100-156-001, 6100-171-178, 6100-206-001, 6100-226-001.

An examination of the relevant budget acts Statutes 1985, chapter 111; Statutes 1986, chapter 186; Statutes 1987, chapter 135; and final budgetary changes as published by the Department of Finance for each year, shows [*182] that appropriations in the 11 DOE line item account numbers have supported a very broad range of activities including reimbursement of costs for both mandated and voluntary integration programs, assessment programs, child nutrition, meals for needy pupils, participation in educational commissions, administration costs of various programs, proposal review, teacher recruitment, analysis of cost data, school bus driver instructor training, shipping costs for instructional materials, local assistance for school district transportation aid, summer school programs, local assistance to districts with high concentrations of limited- and non-English-speaking children, adult education, driver training, Urban Impact Aid, and cost of living increases for specific programs. Further evidence regarding the [***46] uses of these funds is found in the deposition testimony of William C. Pieper, Deputy Superintendent for Administration with the State Department of Education, who stated that local school districts were being reimbursed for the costs of desegregation programs from line item account numbers 6100-114-001 and 6100-115-001 in the 1986 State Budget Act.

Comparing the requirements of the Executive Order and guidelines with the broad range of activities supported by the DOE budget, we conclude that the subject funds, although not specifically appropriated for the reimbursement in question, were generally related to the nature of the costs incurred.

With regard to the Commission, the writ sets out three line item account numbers: 8885-001-001; 8885-101-001; and 8885-101-214. A review of the relevant budget acts shows that the first line item provides funding for support of the Commission, and line item number 8885-101-001 provides funding specifically for local assistance "in accordance with the provisions of Section 6 of Article XIII B of the California Constitution . . . ." (Stats. 1986, ch. 186.) Line item number 8885-101-214 also provides funds for "local assistance." Since the Commission [***47] was created specifically to effect reimbursements for qualifying claims, we conclude there is a general relationship between the purpose of the appropriations and the requirements of the Executive Order.

Line item 9840-001-001 of the Reserve for Contingencies or Emergencies defines "contingencies" as "proposed expenditures [**467] arising from unexpected conditions or losses for which no appropriation, or insufficient appropriation, has been made by law and which, in the judgment of the Director of Finance, constitute cases of actual necessity." (All relevant budget acts.) In the instant case, previous to the issuance of the Executive Order, LBUSD could not have anticipated the expenditures necessary to bring it into compliance. Further, the Legislature refused to appropriate the necessary funds [*183] to directly reimburse the district for these expenditures. The necessity exists by virtue of the writ and judgment issued by the trial court. Therefore, this line item, and three others which also support the reserve (9840-001-494, 9840-001-988, 9840-011-001) are generally related to the costs. [16]

16 The costs do not come within past or current definitions of "emergency," which are, respectively, as follows. "[P]roposed expenditures arising from unexpected conditions or losses for which no appropriation, or insufficient appropriation, has been made by law and which in the judgment of the Director of Finance require immediate action to avert undesirable consequences or to preserve the public peace, health or safety." (Fiscal years 1984-1985, 1985-1986.) "[E]xpenditure incurred in response to conditions of disaster or extreme peril which threaten the health or safety of persons or property within the state." (Fiscal years 1986-1987 forward.)

[***48] Finally the writ lists as sources of reimbursement the Special Fund for Economic Uncertainties "or similarly designated accounts . . . ." An examination of Government Code sections 16418 and 16419 relating to the special fund shows only one use of this reserve: establishment of the Disaster Relief Fund "for purposes of funding disbursements made for response to and recovery from the earthquake, aftershocks, and any other related casualty." No evidence in the record indicates a general relationship between this purpose and the costs incurred by LBUSD. We conclude, therefore, that this source of funding cannot be used for reimbursement. This source is stricken from the judgment.

The description of further sources of funding as "similarly designated accounts" fails to sufficiently identify these sources and we therefore strike this part of the judgment.

In a supplemental brief, LBUSD requests this court to take judicial notice of the Budget Acts of 1988-1989 (Stats. 1988, ch. 313) and 1989-1990 (Stats. 1989, ch. 93) pursuant to the Evidence Code (Evid. Code, §§ 451, subd. (a), 452, subd. (a), 452, subd. (c), 459) and to order that the amounts set forth in the judgment and writ be [***49] satisfied from specific line item accounts in these later budgets and from the Special Fund for Economic Uncertainties. [17]

17 LBUSD identifies the line items accounts as follows: DOE -- 6110-001-001, 6110-001-178, 6110-015-001, 6110-101-001, 6110-114-001, 6110-115-001, 6110-121-001, 6110-156-001, 6110-171-178, 6110-226-001, 6110-230-001; Commission -- 8885-001-001, 8885-101-001, 8885-101-214; Reserve for Contingencies or Emergencies -- 9840-001-001, 9840-001-494, 9840-001-988, 9840-011-001.

(19) "An appellate court is empowered to add a directive that the trial court order be modified to include charging orders against funds appropriated by subsequent budget acts. [Citation.]" (*Carmel Valley, supra,* 190 Cal.App.3d at p. 557.)

(17c) We have reviewed the designated budget acts and conclude that the specified line item accounts for DOE, the Commission, [*184] and the Reserve for Contingencies and Emergencies provide funds for a broad range of activities similar to those set out above and therefore [***50] are generally related to the nature of the costs incurred. However, for the reasons previously discussed, we decline to designate the Special Fund for Economic Uncertainties as a source for reimbursement.

While we have concluded that certain line item accounts are generally related to the nature of the costs incurred, there must also be evidence that at the time of the order the enumerated budget items contained sufficient funds to cover the award. (Gov. Code, § 12440; *Mandel* v. *Myers, supra,* 29 Cal.3d at p. 543; *Carmel Valley, supra,* 190 Cal.App.3d at p. 541; cf. *Baggett* v. *Dunn* (1886) 69 Cal. 75, 78 [10 P. 125]; *Marshall* v. *Dunn* (1886) 69 Cal. 223, 225 [10 P. 399].) The record before [**468] us contains evidence regarding balances at various points in time for some of the line item accounts, but that evidence is primarily in the form of uninterpreted statistical data. We have not found a clear statement which would satisfy this requirement. Furthermore, not every line item was in existence every fiscal year. In addition, those which [***51] entered the budgetary process did not always survive it unscathed. Therefore, we remand the matter to the trial court to determine with regard to the line item account numbers approved above whether funds sufficient to satisfy the award were available at the time of the order. (Cf. *County of Sacramento* v. *Loeb* (1984) 160 Cal.App.3d 446, 454-455 [206 Cal.Rptr. 626].) If the trial court determines that the unexhausted funds remaining in the specified appropriations are insufficient, the trial court order can be further amended to reach subsequent appropriated funds. (*County of Sacramento* at p. 457; *Serrano v. Priest* (1982) 131 Cal.App.3d 188, 198 [182 Cal.Rptr. 387].)

(20) Having concluded that certain appropriations are generally available to reimburse LBUSD, we turn to an additional issue raised by State: that the "finding" by the Legislature that the Executive Order does not impose a "state-mandated local program" prevents reimbursement.

Unsupported legislative disclaimers are insufficient to defeat reimbursement. (*Carmel Valley, supra,* 190 Cal.App.3d at pp. 541-544.) As discussed, [***52] LBUSD, pursuant to Section 6, has a constitutional right to reimbursement of its costs in providing an increased service mandated by the state. The Legislature cannot limit a constitutional right. (*Hale* v. *Bohannon* (1952) 38 Cal.2d 458, 471 [241 P.2d 4].)

B. DOE Contentions

DOE is sympathetic to LBUSD's position. On appeal, it takes no stand on the issue whether the Executive Order constitutes a state mandate within [*185] the meaning of Section 6.

(21) The thrust of its appeal is that, if there is a mandate, the DOE budget is an inappropriate source of funding in comparison with other budget line item accounts included in the order.

We conclude to the contrary because logic dictates that DOE funding be the initial and primary source for reimbursement. As discussed, the test set forth in *Mandel* and *Carmel Valley* is whether there is a general relationship between budget items and reimbursable expenditures. Since the Executive Order was issued by DOE, it is not surprising that the evidence overwhelmingly supports the finding of the trial court that this general relationship exists with regard to the DOE budget.

While we also have concluded [***53] that certain line item accounts for entities other than DOE are also appropriate sources of funding, the record does not provide the statistical data necessary to determine how far the order will reach with regard to these additional sources of support.

DOE also contends that reimbursement for expenditures in fiscal years 1977-1978, 1978-1979, and 1979-1980 cannot be awarded under Section 6 because

the amendment was not effective until July 1, 1980. As discussed, this argument has been previously rejected. (*Carmel Valley Fire Protection Dist.* v. *State of California, supra*, 190 Cal.App.3d at pp. 547-548; *City of Sacramento* v. *State of California, supra*, 156 Cal.App.3d 182, 191-194, disapproved on other grounds in *County of Los Angeles* v. *State of California, supra*, 43 Cal.3d 46, 58, fn. 10.)

(22) Finally, DOE contends that interest should have been awarded at the rate of 6 percent per annum pursuant to Government Code section 926.10 rather than at the legal rate provided under article XV, section 1, paragraph (2) of the California Constitution.

Government Code section [***54] 926.10 is part of the California Tort Claims Act (Gov. Code, § 900 et seq.) which provides a statutory scheme for the filing of claims against public entities for alleged injuries; it makes no provision for claims for reimbursement [**469] for state mandated expenditures. In *Carmel Valley* a judgment awarding interest at the legal rate was affirmed. (*Carmel Valley Fire Protection Dist.* v. *State of California, supra*, 190 Cal.App.3d at p. 553.) We decline the invitation of DOE to apply another rule.

C. Cross Appeal of LBUSD

(23) LBUSD seeks reversal of that part of the judgment holding that monies in the Fines and Forfeitures Funds in the custody and possession of [*186] cross-respondent Auditor-Controller of the County of Los Angeles (County Controller) for transfer to the state treasury are not reasonably available for reimbursement of its state mandated expenditures. [18]

> 18 In its first amended petition, LBUSD listed the following code sections as appropriate sources of reimbursement: " Penal Code Sections 1463.02, 1463.03, 1403.5A and 1464; Government Code Sections 13967, 26822.3 and 72056; Health and Safety Code Section 11502; and Vehicle Code Sections 1660.7, 42003, and 41103.5."

[***55] As previously stated, funds are "reasonably available" when the purposes for which those funds were appropriated are generally related to the nature of the costs incurred. (*Carmel Valley, supra*, 190 Cal.App.3d at pp. 540-541.) LBUSD does not cite, nor have we found, any evidence in the record showing the use of those funds once they are transmitted to the state and that those funds are then "reasonably available" to satisfy the Claim. We cannot conclude as a matter of law that a general relationship exists between those funds and the nature of the costs incurred pursuant to the Executive Order. LBUSD has failed to carry its burden of proof and the trial court correctly decided these funds were not "reasonably available" for reimbursement.

Nor have we concluded that there is any ground on which the funds could be made available to LBUSD while in the possession of the county Auditor-Controller. The instant case differs from *Carmel Valley* wherein we affirmed an order which authorized a county to satisfy its claims against the state by offsetting fines and forfeitures it held which were due the state. The *Carmel Valley, supra*, 190 Cal.App.3d 521, [***56] holding was based on the right of offset as "a long-established principle of equity." (*Id.* at p. 550.) That is a different standard than the standard of "generally related to the nature of costs incurred." In the case at bar there is no set-off relationship between county and LBUSD.

We conclude that because the doctrines of collateral estoppel and waiver are inapplicable to the facts of this case, the trial court should have allowed State to challenge the decisions of the Board. However, we also determine, as a question of law, that the Executive Order requires local school boards to provide a higher level of service than is required constitutionally or by case law and that the Executive Order is a reimbursable state mandate pursuant to article XIII B, section 6 of the California Constitution. Former Revenue and Tax Code section 2234 does not provide reimbursement of the subject claim.

[*187] Based on uncontradicted evidence, we modify the decision of the trial court by striking as sources of reimbursement the Special Fund for Economic Uncertainties "or similarly designated accounts." We also modify the judgment to include charging orders against [***57] certain funds appropriated through subsequent budget acts.

We affirm the decision of the trial court that the Fines and Forfeitures Funds are not "reasonably available" to satisfy the Claim.

Finally, we remand the matter to the trial court to determine whether at the time of its order, unexpended, unencumbered funds sufficient to satisfy the judgment remained in the approved budget line item account numbers. The trial court is also directed to determine this same issue with respect to the charging order.

The judgment is affirmed as modified. Each party is to bear its own costs on appeal.

[*188] [**470] Appendix

The superior court judgment provides in pertinent part: "It Is Ordered, Adjudged and Decreed That: "1. The requirements contained in Title 5, California Administrative Code, Sections 90-101 constitute a reimbursable State-mandate which cannot be challenged by State

Respondents or Respondent DOE because of the doctrines of administrative collateral estoppel and waiver.

"2. There are appropriated funds from specified line items in the 1984, 1985, 1986 and 1987 budgets which are 'reasonably available' to reimburse Petitioner for State-mandated costs it has occurred [*sic*] as [***58] a result of its compliance with the requirements of Title 5, California Administrative Code, Sections 90-101.

"3. The funds appropriated by the Legislature for:

"(a) the support of the Department of Education, including, but not limited, to the Department's General Fund;

"(b) the Commission on State Mandates, including, but not limited to the State Mandates Claim Fund; and

"(c) the 'Reserve for Contingencies or Emergencies', 'Special Fund for Economic Uncertainties' or similarly designated accounts, are 'reasonably available' and may properly be and should be encumbered and expended for the reimbursement of State-mandated costs in the amount of $ 28,014,869.00, plus applicable interest, as incurred by Petitioner and as computed by Petitioner in compliance with Parameters and Guidelines adopted by the State Board of Control.

"4. The law in effect at the time that Petitioner's claim was processed provided for the computation of a specific claim amount for specific fiscal years based on Parameters and Guidelines, or claiming instructions, adopted in April 1984 and a Statewide Cost Estimate adopted on August 23, 1984, both of which are administrative actions of the State Board of Control [***59] which have not been challenged by State Respondents. The computations made pursuant to the Parameters and Guidelines and Statewide Cost Estimate are specific and ascertainable and subject to audit by the State Controller under Government Code section 17558.

"5. The Court decrees that State funds entitled the 'Fines and Forfeitures Funds' under the custody and control of Respondent Bloodgood, are not reasonably available for satisfaction of Petitioner's claim for reimbursement of State-mandated costs.

"6. A peremptory writ of mandamus shall issue under the seal of this Court, commanding State Respondents and Respondent Doe to comply with Article XIIIB, Section 6 of the California Constitution and Government Code Section 17565 and reimburse petitioner for:

"(a) State-mandated costs in the amount of $ 24,164,593.00, incurred as a result of its compliance with the requirements of Title 5, California Administrative Code, Sections 90-101 during fiscal years 1977-78 through 1982-1983, plus interest at the legal rate from September 28, 1985; and

"(b) State-mandated costs in the amount of $ 3,850,276.00, incurred as a result of Petitioner's compliance with the requirements of Title 5, California [***60] Administrative Code, Sections 90-101 during fiscal years 1983-84 and 1984-85, plus interest at the legal rate from September 28, 1985.

"7. Said peremptory writ shall command Respondent Gray Davis, State Controller, or his successor-in-interest, to pay the claims of Petitioner, plus interest at the legal rate from [*189] September 28, 1985 from the appropriations in the State Budget Acts for the 1984-85, 1985-86, 1986-87 and 1987-88 fiscal years, and the subsequently enacted State Budget Acts, which include, or will include appropriations for:

"(a) the support of the Department of Education, including, but not limited to the Department's General Fund;

"(b) the Commission on State Mandates, including, but not limited to the State Mandates Claim Fund; and

"(c) the 'Reserve for Contingencies or Emergencies', Special Fund for Economic [**471] Uncertainties' or similarly designated accounts, which are 'reasonably available' to be encumbered and expended for the reimbursement of State-mandated costs incurred by Petitioner and further shall compel Elizabeth Whitney, Acting State Treasurer, or her successor-in-interest, to make payments on the warrants drawn by Respondent Gray Davis, State Controller [***61] upon their presentation for payment by Petitioner without offset or attempt to offset against other monies due and owing Petitioner until Petitioner is reimbursed for all such costs.

"8. Said Peremptory Writ of Mandate also shall command Respondent Jesse R. Huff, Director of the State Department of Finance, to perform such actions as may be necessary to effect reimbursement required by other portions of this Judgment, including but not limited to, those actions specified in Chapter 135, Statutes of 1987, Section 2.00, pp. 549-553, or with respect to the Special Fund for Economic Uncertainties.

"9. Pending the final disposition of this proceeding, State Respondents and Respondent DOE, and each of them, their successors in office, agents, servants and employees and all persons acting in concert or participation with them, are hereby enjoined or restrained from directly or indirectly expending from the appropriations described in Paragraph No. 7 hereinabove any sums greater than that which would leave in said appropriations at the conclusion of the respective fiscal years an amount less than the reimbursement amounts claimed by Petitioner together with interest at the legal rate through [***62] payment of said reimbursement amount. Said

amounts are hereinafter referred to collectively as the 'reimbursement award sum'.

"10. Pending the final disposition of this proceeding State Respondents and Respondent DOE, and each of them, their successors in office, agents, servants and employees, and all persons acting in concert or participation with them, are hereby enjoined and restrained from directly or indirectly causing to revert the reimbursement award sum from the appropriations described in Paragraph No. 7 hereinabove to the general funds of the State of California and from otherwise dissipating the reimbursement award sum in a manner that would make it unavailable to satisfy this Court's judgment.

"11. The State Respondents and Respondent Doe have a continuing obligation to reimburse Petitioner for costs incurred in compliance with the requirements contained in Title 5, California Administrative Code, Section 90-101 in the fiscal years subsequent to it's [*sic*] claims for expenditures in fiscal years 1977-78 through 1984-85 as set forth in the First Amended Petition, as amended, and the accompanying Motion For the Issuance Of A Writ Of Mandate.

"12. The deletion of funding [***63] for reimbursement of State-mandated costs incurred in compliance with Title 5, California Administrative Code, Sections 90-101 from Chapter 1175, Statutes of 1985 was invalid and unconstitutional.

"13. Respondent Gray Davis, State Controller, shall retain the right to audit the claims and records of the Petitioner pursuant to Government Code Section 17561(d) to verify the actual dollar amount of the reimbursement award sum.

"14. The Court reserves and retains jurisdiction to effect any appropriate remedy at law or equity which may be necessary to enforce its judgment or order.

[*190] "15. Petitioner shall recover from State Respondents and Respondent DOE costs in this proceeding in the amount of 1,863.54.

"Dated: 3-2, 1988	"/s/ Weil
	"Robert I. Weil
	"Judge of The Superior Court"

TAB "18"

LEXSEE

Positive
As of: Jun 23, 2010

REDEVELOPMENT AGENCY OF THE CITY OF SAN MARCOS, Plaintiff and Appellant, v. CALIFORNIA COMMISSION ON STATE MANDATES, Defendant and Respondent; CALIFORNIA DEPARTMENT OF FINANCE, Intervener and Respondent.

No. D026195.

COURT OF APPEAL OF CALIFORNIA, FOURTH APPELLATE DISTRICT, DIVISION ONE

55 Cal. App. 4th 976; 64 Cal. Rptr. 2d 270; 1997 Cal. App. LEXIS 474; 97 Cal. Daily Op. Service 4510; 97 Daily Journal DAR 7464

May 30, 1997, Decided

SUBSEQUENT HISTORY: [***1] The Publication Status of this Document has been Changed by the Court from Unpublished to Published June 12, 1997. Review Denied September 3, 1997, Reported at: 1997 Cal. LEXIS 5622.

PRIOR HISTORY: Superior Court of San Diego County, Super. Ct. No. 686818. Sheridan Reed and Herbert Hoffman, Judges.

DISPOSITION: The judgment is affirmed.

CASE SUMMARY:

PROCEDURAL POSTURE: Appellant redevelopment agency sought review of a judgment by the Superior Court of San Diego County (California), which denied appellant's petition for writ of administrative mandamus as to a decision of respondent commission on state mandates. Appellant claimed that the state should have reimbursed appellant for tax increment financing under Cal. Const. art. XIII B, § 6.

OVERVIEW: Appellant redevelopment agency challenged the decision of respondent commission on state mandates. Respondent denied appellant's test claim, which sought reimbursement of tax increment financing through a petition for writ of administrative mandamus. The trial court denied the petition. On appeal, appellant contended that reimbursement for tax increment financing was required under Cal. Const. art. XIII B, §6. The court rejected this contention, finding that the 20 percent housing fund set-aside requirement of appellant's tax increment financing did not qualify under Cal. Const. art XIII, § 6 as a "cost" of a program because tax increment financing was not within the scope of this portion of the state constitution. The court reasoned that the same policies that supported exempting tax increment revenues from Cal. Const. art. XIII B appropriations limits also supported denying reimbursement under Cal. Const. art. XIII B, § 6 for this particular allocation of revenues. Accordingly, the court affirmed the judgment denying the petition for writ of administrative mandamus.

OUTCOME: The court affirmed the trial court's judgment denying appellant redevelopment agency's petition for writ of administrative mandamus as to the decision of respondent commission on state mandates that denied appellant's reimbursement of tax increment financing. The court found that appellant's tax increment financing did not qualify as a cost of a program under the state constitution and therefore was not reimbursable.

CORE TERMS: tax increment financing, subvention, redevelopment agency, proceeds of taxes, housing, appropriation, redevelopment, entity, reimbursement, local government, local agency, tax revenues, spending, italics, level of service, financing, expend, state mandates, state subvention, tax revenues, increment, taxation, fis-

cal, subvention of funds, new program, state-mandated, levied, user, Community Redevelopment Law, constitutional provision

LexisNexis(R) Headnotes

Administrative Law > Judicial Review > Remedies > Mandamus
Administrative Law > Judicial Review > Standards of Review > Substantial Evidence
Civil Procedure > Appeals > Standards of Review > Substantial Evidence > General Overview
[HN1]Under Cal. Gov't Code § 17559, review by administrative mandamus is the exclusive method of challenging the California Commission on State Mandates' decision denying a subvention claim. On appellate review, the reviewing court applies these standards: if Cal. Gov't Code § 17559 governs the proceeding below, then the trial court must review the decision of the commission under the substantial evidence standard. Where the substantial evidence test is applied by the trial court, the reviewing court is generally confined to inquiring whether substantial evidence supports the court's findings and judgment. However, the reviewing court independently reviews the superior court's legal conclusions about the meaning and effect of constitutional and statutory provisions.

Governments > Local Governments > Finance
Governments > State & Territorial Governments > Finance
[HN2]Cal. Const. art. XIII A imposes a limit on the power of state and local governments to adopt and levy taxes. Cal. Const. art. XIII B imposes a complementary limit on the rate of growth in governmental spending. These two constitutional articles work in tandem, together restricting the state governments' power both to levy and to spend for public purposes.

Governments > Local Governments > Finance
Governments > State & Territorial Governments > Finance
[HN3]Cal. Const. art. XIII B, § 6 requires that whenever the California Legislature or any state agency mandates a "new program or higher level of service" on any local government, the state shall provide a subvention of funds to reimburse such local government for the costs of such program or increased level of service.

Governments > State & Territorial Governments > Finance
[HN4]The funds a redevelopment agency receives from tax increment financing do not constitute "proceeds of taxes" subject to Cal Const. art. XIII B, § 6 appropriations limits.

Governments > State & Territorial Governments > Finance
[HN5]See Cal. Const. art. XIII B, § 8(c).

Constitutional Law > State Constitutional Operation
[HN6]The rules of constitutional interpretation require a strict construction of Cal. Const. art. XIII, § 6, because constitutional limitations and restrictions on legislative powers are not to be extended to include matters not covered by the language used.

Governments > Local Governments > Finance
Governments > State & Territorial Governments > Finance
[HN7]Cal. Const. art. XIII B does not limit the ability to expend government funds collected from all sources. Rather, the appropriations limit is based on "appropriations subject to limitation," which consists primarily of the authorization to expend during a fiscal year the "proceeds of taxes." Cal. Const. art. XIII B, § 8(a).

Governments > State & Territorial Governments > Finance
[HN8]See Cal. Const. art. XIII B, § 8(P)(b).

SUMMARY:

CALIFORNIA OFFICIAL REPORTS SUMMARY

The trial court denied a petition for a writ of administrative mandate brought by a city's redevelopment agency that challenged the California Commission on State Mandates' denial of the agency's test claim under Gov. Code, § 17550 et seq. (reimbursement of costs mandated by the state). In its claim, the agency sought a determination that the State of California should reimburse the agency for moneys transferred into its low- and moderate-income housing fund pursuant to Health & Saf. Code, §§ 33334.2 and 33334.3, of the Community Redevelopment Law. Those statutes require a 20 percent deposit of the particular form of financing received by the agency (tax increment financing generated from its project areas) for purposes of improving the supply of affordable housing. The agency claimed that this tax increment financing should not be subject to state control

of the allocations made to various funds and that such control constituted a statemandated new program or higher level of service for which reimbursement or subvention was required under Cal. Const., art. XIII B, § 6. The trial court found that the source of funds used by the agency was exempt, under Health & Saf. Code, § 33678, from the scope of Cal. Const., art. XIII B, § 6. (Superior Court of San Diego County, No. 686818, Sheridan E. Reed and Herbert B. Hoffman, Judges.)

The Court of Appeal affirmed. It held that under Health & Saf. Code, § 33678, which provides that tax increment financing is not deemed to be the "proceeds of taxes," the source of funds used by the agency was exempt from the scope of Cal. Const., art. XIII B, § 6. Although Cal. Const., art. XIII B, § 6, does not expressly discuss the source of funds used by an agency to fund a program, the historical and contextual context of this provision demonstrates that it applies only to costs recovered solely from tax revenues. Because of the nature of the financing they receive (i.e., tax increment financing), redevelopment agencies are not subject to appropriations limitations or spending caps, they do not expend any proceeds of taxes, and they do not raise general revenues for the local entity. Also, the state is not transferring any program for which it was formerly responsible. Therefore, the purposes of state subvention laws are not furthered by requiring reimbursement when redevelopment agencies are required to allocate their tax increment financing in a particular manner, as in the operation of Health & Saf. Code, §§ 33334.2 and 33334.3. (Opinion by Huffman, J., with Work, Acting P. J., and McIntyre, J., concurring.)

HEADNOTES

CALIFORNIA OFFICIAL REPORTS HEADNOTES

Classified to California Digest of Official Reports

(1) State of California § 11--Fiscal Matters--Subvention: Words, Phrases, and Maxims--Subvention. --"Subvention" generally means a grant of financial aid or assistance, or a subsidy.

(2) State of California § 11--Fiscal Matters--Subvention--Judicial Rules. --Under Gov. Code, § 17559, review by administrative mandamus is the exclusive method of challenging a decision of the California Commission on State Mandates to deny a subvention claim. The determination whether the statutes at issue established a mandate under Cal. Const., art. XIII B, § 6, is a question of law. On appellate review, the following standards apply: Gov. Code, § 17559, governs the proceeding below and requires that the trial court review the decision of the commission under the substantial evidence standard. Where the substantial evidence test is applied by the trial court, the appellate court is generally confined to inquiring whether substantial evidence supports the trial court's findings and judgment. However, the appellate court independently reviews the trial court's legal conclusions about the meaning and effect of constitutional and statutory provisions.

(3a) (3b) State of California § 11--Fiscal Matters--Subvention--Statemandated Costs--Statutory Set-aside Requirement for Local Redevelopment Agency's Tax Increment Financing. --The California Commission on State Mandates properly denied a test claim brought by a city's redevelopment agency seeking a determination that the state should reimburse the agency for moneys transferred into its low- and moderate-income housing fund pursuant to Health & Saf. Code, §§ 33334.2 and 33334.3, which require a 20 percent deposit of the particular form of financing received by the agency, i.e., tax increment financing generated from its project areas. Under Health & Saf. Code, § 33678, which provides that tax increment financing is not deemed to be the "proceeds of taxes," the source of funds used by the agency was exempt from the scope of Cal. Const., art. XIII B, § 6 (subvention). Although Cal. Const., art. XIII B, § 6, does not expressly discuss the source of funds used by an agency to fund a program, the historical and contextual context of this provision demonstrates that it applies only to costs recovered solely from tax revenues. Because of the nature of the financing they receive (i.e., tax increment financing), redevelopment agencies are not subject to appropriations limitations or spending caps, they do not expend any proceeds of taxes, and they do not raise general revenues for the local entity. Also, the state is not transferring any program for which it was formerly responsible. Therefore, the purposes of state subvention laws are not furthered by requiring reimbursement when redevelopment agencies are required to allocate their tax increment financing in a particular manner, as in the operation of Health & Saf. Code, §§ 33334.2 and 33334.3.

[See 9 Witkin, Summary of Cal. Law (9th ed. 1989) Taxation, § 123.]

(4) Constitutional Law § 10--Construction of Constitutional Provisions--Limitations on Legislative Powers. --The rules of constitutional interpretation require a strict construction of a constitutional provision that contains limitations and restrictions on legislative powers, because such limitations and restrictions are not to be extended to include matters not covered by the language used.

(5) State of California § 11--Fiscal Matters--Subvention--Purpose of Constitutional Provi-

sions. --The goal of Cal. Const., arts. XIII A and XIII B, is to protect California residents from excessive taxation and government spending. A central purpose of Cal. Const., art. XIII B, § 6 (reimbursement to local government of state-mandated costs), is to prevent the state's transfer of the cost of government from itself to the local level.

COUNSEL: Higgs, Fletcher & Mack and John Morris for Plaintiff and Appellant.

Gary D. Hori for Defendant and Respondent.

Daniel E. Lungren, Attorney General, Robert L. Mukai, Chief Assistant Attorney General, Linda A. Cabatic and Daniel G. Stone, Deputy Attorneys General, for Intervener and Respondent.

JUDGES: Opinion by Huffman, J., with Work, Acting P. J., and McIntyre, J., concurring.

OPINION BY: HUFFMAN

OPINION

[*979] [**271] **HUFFMAN, J.**

The California Commission on State Mandates (the Commission) denied a test claim by the Redevelopment Agency of the City of San Marcos (the Agency) (Gov. Code, § 17550 et seq.), which sought a determination that the State of California should reimburse the Agency for moneys transferred into its Low and Moderate Income Housing Fund (the Housing Fund) pursuant to Health and Safety Code [1] sections 33334.2 and 33334.3. Those sections [***2] require a 20 percent deposit of the particular form of financing received by the Agency, tax increment financing generated from its project areas, for purposes of improving the supply of affordable housing. **(1) (See fn. 2.)** The Agency claimed that this tax increment financing should not be subject to state control of the allocations made to various funds and that such control constituted a state-mandated new program or higher level of service for which reimbursement or subvention was required under article XIII B of the California Constitution, section 6 (hereafter section 6; all further references to articles are to the California Constitution). [2] (Cal. Const., art. XVI, § 16; § 33670.)

1 All further statutory references are to the Health and Safety Code unless otherwise noted.

2 " 'Subvention' generally means a grant of financial aid or assistance, or a subsidy. [Citation.]" (*Hayes v. Commission on State Mandates* (1992) 11 Cal. App. 4th 1564, 1577 [15 Cal. Rptr. 2d 547].)

The Agency brought a petition [***3] for writ of administrative mandamus to challenge the decision of the Commission. (Code Civ. Proc., § 1094.5; Gov. Code, § 17559.) The superior court denied the petition, ruling that the source of funds used by the Agency for redevelopment, tax increment financing, was exempt pursuant to section 33678 from the scope of section 6, as not constituting "proceeds of taxes" which are governed by that section. The superior court did not rule upon the alternative grounds of decision stated by the Commission, i.e., the 20 percent set-aside requirement for lowand moderate-income housing did not impose a new program or higher level of service in an existing program within the meaning of section 6, and, further, there were no costs subject to reimbursement related to the Housing Fund because there was no net increase in the aggregate program responsibilities of the Agency.

[**272] The Agency appeals the judgment denying its petition for writ of mandate. For the reasons set forth below, we affirm.

[*980] I.

PROCEDURAL CONTEXT

This test claim was litigated before the Commission pursuant to statutory procedures for determining whether a statute imposes state-mandated costs upon a local agency [***4] which must be reimbursed, through a subvention of funds, under section 6. (Gov. Code, § 17500 et seq.) [3] The Commission hearing consisted of oral argument on the points and authorities presented.

3 In our prior opinion issued in this case, we determined the trial court erred when it denied the California Department of Finance (DOF) leave to intervene as an indispensable party and a real party in interest in the mandamus proceeding. (*Redevelopment Agency v. Commission on State Mandates* (1996) 43 Cal. App. 4th 1188, 1194-1199 [51 Cal. Rptr. 2d 100].) Thus, DOF is now a respondent on this appeal, as is the Commission (sometimes collectively referred to as respondents). However, our decision in that case was a collateral matter and does not assist us on the merits of this proceeding.

(2) [HN1]Under Government Code section 17559, review by administrative mandamus is the exclusive method of challenging a Commission decision denying a subvention claim. "The determination whether the statutes here at issue established [***5] a mandate under section 6 is a question of law. [Citation.]" (*County of San Diego v. State of California* (1997) 15 Cal. 4th 68, 109 [61 Cal. Rptr. 2d 134, 931 P.2d 312].) On appellate review, we apply these standards: " Government Code

section 17559 governs the proceeding below and requires that the trial court review the decision of the Commission under the substantial evidence standard. Where the substantial evidence test is applied by the trial court, we are generally confined to inquiring whether substantial evidence supports the court's findings and judgment. [Citation.] However, we independently review the superior court's legal conclusions about the meaning and effect of constitutional and statutory provisions. [Citation.]" (*City of San Jose v. State of California* (1996) 45 Cal. App. 4th 1802, 1810 [53 Cal. Rptr. 2d 521].)

II.

STATUTORY SCHEMES

Before we outline the statutory provisions setting up tax increment financing for redevelopment agencies, we first set forth the Supreme Court's recent summary of the history and substance of the law applicable to state mandates, such as the Agency claims exist here: "Through adoption of Proposition 13 in 1978, [***6] the voters added [HN2]article XIII A to the California Constitution, which 'imposes a limit on the power of state and local governments to [*981] adopt and levy taxes. [Citation.]' [Citation.] The next year, the voters added article XIII B to the Constitution, which 'impose[s] a complementary limit on the rate of growth in governmental spending.' [Citation.] These two constitutional articles 'work in tandem, together restricting California governments' power both to levy and to spend for public purposes.' [Citation.] Their goals are 'to protect residents from excessive taxation and government spending. [Citation.]' [Citation.]" (*County of San Diego v. State of California, supra*, 15 Cal. 4th at pp. 80-81.)

[HN3]Section 6, part of article XIII B and the provision here at issue, requires that whenever the Legislature or any state agency mandates a "new program or higher level of service" on any local government, " 'the state shall provide a subvention of funds to reimburse such local government for *the costs of such program* or increased level of service . . . .' " (*County of San Diego v. State of California, supra*, 15 Cal. 4th at p. 81, italics added.) Certain [***7] exceptions are then stated, none of which is relevant here. [4]

4 Section 6 lists the following exclusions to the requirement for subvention of funds: "(a) Legislative mandates requested by the local agency affected; [P] (b) Legislation defining a new crime or changing an existing definition of a crime; or [P] (c) Legislative mandates enacted prior to January 1, 1975, or executive orders or regulations initially implementing legislation enacted prior to January 1, 1975." In *City of Sacramento v. State of California* (1990) 50 Cal. 3d 51, 69 [266 Cal. Rptr. 139, 785 P.2d 522], the Supreme Court identified these items as exclusions of otherwise reimbursable programs from the scope of section 6. (See also Gov. Code, § 17514, definition of "costs mandated by the state," using the same "new program or higher level of service" language of section 6.)

[**273] In *County of San Diego v. State of California, supra*, 15 Cal. 4th at page 81, the Supreme Court explained that section 6 represents a recognition [***8] that together articles XIII A and XIII B severely restrict the taxing and spending powers of local agencies. The purpose of the section is to preclude the state from shifting financial responsibility for governmental functions to local agencies, which are ill equipped to undertake increased financial responsibilities because they are subject to taxing and spending limitations under articles XIII A and XIII B. (*County of San Diego v. State of California, supra*, at p. 81.)

To evaluate the Agency's argument that the provisions of sections 33334.2 and 33334.3, requiring a deposit into the housing fund of 20 percent of the tax increment financing received by the Agency, impose this type of reimbursable governmental program or a higher level of service under an existing program, we first review the provisions establishing financing for redevelopment agencies. Such agencies have no independent powers of taxation (*Huntington Park Redevelopment Agency v. Martin* (1985) 38 Cal. 3d [*982] 100, 106 [211 Cal. Rptr. 133, 695 P.2d 220]), but receive a portion of tax revenues collected by other local agencies from property within a redevelopment project area, which may result from [***9] the following scheme: "Redevelopment agencies finance real property improvements in blighted areas. Pursuant to article XVI, section 16 of the Constitution, these agencies are authorized to use tax increment revenues for redevelopment projects. The constitutional mandate has been implemented through the Community Redevelopment Law (Health & Saf. Code, § 33000 et seq.). [P] The Community Redevelopment Law authorizes several methods of financing; one is the issuance of tax allocation bonds. Tax increment revenue, the increase in annual property taxes attributable to redevelopment improvements, provides the security for tax allocation bonds. Tax increment revenues are computed as follows: The real property within a redevelopment project area is assessed in the year the redevelopment plan is adopted. Typically, after redevelopment, property values in the project area increase. The taxing agencies (e.g., city, county, school or special district) keep the tax revenues attributable to the original assessed value and pass the portion of the assessed property value which exceeds the original assessment on to the redevelopment agency. (Health & Saf. Code, § 33640, 33641, 33670, 33675). In

[***10] short, tax increment financing permits a redevelopment agency to take advantage of increased property tax revenues in the project areas without an increase in the tax rate. This scheme for redevelopment financing has been a part of the California Constitution since 1952. (Cal. Const., art. XVI, § 16.)" (*Brown v. Community Redevelopment Agency* (1985) 168 Cal. App. 3d 1014, 1016-1017 [214 Cal. Rptr. 626].) [5]

5 Section 33071 in the Community Redevelopment Law provides that a fundamental purpose of redevelopment is to expand the supply of lowand moderate-income housing, as well as expanding employment opportunities and improving the social environment.

In *Brown v. Community Redevelopment Agency, supra*, 168 Cal. App. 3d at pages 1016-1018, the court determined that by enacting section 33678, the Legislature interpreted article XIII B of the Constitution as not broad enough in reach to cover the raising or spending of tax increment revenues by redevelopment agencies. Specifically, the court decided [***11] [HN4]the funds a redevelopment agency receives from tax increment financing do not constitute "proceeds of taxes" subject to article XIII B appropriations limits. (*Brown v. Community Redevelopment Agency, supra*, at p. 1019). [6] [**274] This ruling was based on section 33678, providing in pertinent part: "This section implements and fulfills the intent . . . of Article XIII B and Section 16 of Article [*983] XVI of the California Constitution. *The allocation and payment to an agency of the portion of taxes specified in subdivision (b) of Section 33670 for the purpose of paying principal of, or interest on . . . indebtedness incurred for redevelopment activity . . . shall not be deemed the receipt by an agency of proceeds of taxes levied by or on behalf of the agency within the meaning of or for the purposes of Article XIII B . . . nor shall such portion of taxes be deemed receipt of proceeds of taxes by, or an appropriation subject to limitation of, any other public body within the meaning or for purposes of Article XIII B* . . . or any statutory provision enacted in implementation of Article XIII B. *The allocation and payment to an agency of this portion of taxes* [***12] *shall not be deemed the appropriation by a redevelopment agency of proceeds of taxes levied by or on behalf of a redevelopment agency within the meaning or for purposes of Article XIII B of the California Constitution*." (Italics added.)

6 The term of art, "proceeds of taxes," is defined in [HN5]article XIII B, section 8, as follows: (c) " *'Proceeds of taxes' shall include, but not be restricted to, all tax revenues* and the proceeds to an entity of government, from (1) regulatory licenses, user charges, and user fees to the extent that those proceeds exceed the costs reasonably borne by that entity in providing the regulation, product, or service, and (2) the investment of tax revenues. With respect to any local government, 'proceeds of taxes' shall include subventions received from the state, other than pursuant to Section 6, and, with respect to the state, proceeds of taxes shall exclude such subventions." (Italics added.)

In *County of Placer v. Corin* (1980) 113 Cal. App. 3d 443, 451 [170 Cal. Rptr. [***13] 232], the court defined "proceeds of taxes" IN THIS WAY: "Under article XIII B, with the exception of state subventions, the items that make up the scope of ' "proceeds of taxes" ' concern charges levied to raise *general revenues* for the local entity. ' "Proceeds of taxes," ' in addition to 'all tax revenues' includes 'proceeds . . . from . . . regulatory licenses, user charges, and user fees [*only*] *to the extent that such proceeds exceed the costs reasonably borne by such entity in providing the regulation, product or service*. . . .' (§ 8, subd. (c).) (Italics added.) Such 'excess' regulatory or user fees are but *taxes* for the raising of general revenue for the entity. [Citations.] Moreover, to the extent that an assessment results in revenue above the cost of the improvement or is of general public benefit, it is no longer a special assessment but a tax. [Citation.] *We conclude 'proceeds of taxes' generally contemplates only those impositions which raise general tax revenues for the entity*." (Italics added.) [7]

7 The issues before the court in *County of Placer v. Corin, supra*, 113 Cal. App. 3d 443 were whether special assessments and federal grants should be considered proceeds of taxes; the court held they should not. Section 6 is not discussed; the court's analysis of other concepts found in article XIII B is nevertheless instructive.

[***14] **(3a)** In light of these interrelated sections and concepts, our task is to determine whether the 20 percent Housing Fund set-aside requirement of a redevelopment agency's tax increment financing qualifies under section 6 as a "cost" of a program. As will be explained, we agree with the trial court that the resolution of this issue is sufficient to dispose of the entire matter, and [*984] accordingly we need not discuss the alternate grounds of decision stated by the Commission. [8]

8 The alternate grounds of the Commission's decision were that there were no costs subject to reimbursement related to the Housing Fund because there was no net increase in the aggregate program responsibilities of the Agency, and that the set-aside requirement did not constitute a

mandated "new program or higher level of service" under this section.

III.

HOUSING FUND ALLOCATIONS: REIMBURSABLE COSTS?

1. *Arguments*

The Agency takes the position that the language of section 33678 is simply inapplicable [**275] to its claim for [***15] subvention of funds required to be deposited into the Housing Fund. It points out that section 6 expressly lists three exceptions to the requirement for subvention of funds to cover the costs of state-mandated programs: (a) Legislative mandates requested by the local agency affected; (b) legislation defining or changing a definition of a crime; or (c) pre-1975 legislative mandates or implementing regulations or orders. (See fn. 4, *ante*.) None of these exceptions refers to the source of the funding originally used by the agency to pay the costs incurred for which reimbursement is now being sought. Thus, the agency argues it is immaterial that under section 33678, *for purposes of appropriations limitations*, tax increment financing is not deemed to be the "proceeds of taxes." (*Brown v. Community Redevelopment Agency, supra*, 168 Cal. App. 3d at pp. 1017-1020.) The Agency would apply a "plain meaning" rule to section 6 (see, e.g., *Davis v. City of* Berkeley (1990) 51 Cal. 3d 227, 234 [272 Cal. Rptr. 139, 794 P.2d 897]) and conclude that the source of the funds used to pay the program costs up front, before any subvention, is not stated in the section and thus is not [***16] relevant.

As an illustration of its argument that the source of its funds is irrelevant under section 6, the Agency cites to Government Code section 17556. That section is a legislative interpretation of section 6, creating several classes of state-mandated programs for which no state reimbursement of local agencies for costs incurred is required. In *County of Fresno v. State of California* (1991) 53 Cal. 3d 482, 487 [280 Cal. Rptr. 92, 808 P.2d 235], the Supreme Court upheld the facial constitutionality of Government Code section 17556, subdivision (d), which disallows state subvention of funds where the local government is authorized to collect service charges or fees in connection with a mandated program. The court explained that section 6 "was designed to protect the tax revenues of local governments from state mandates that [*985] would require expenditure of such revenues." (*County of Fresno v. State of California, supra*, at p. 487.) Based on the language and history of the measure, the court stated, "Article XIII B of the Constitution, however, was not intended to reach beyond taxation." (*Ibid.*) The court therefore concluded that in view of its textual [***17] and historical context, section 6 "requires subvention only when the costs in question can be recovered *solely from tax revenues*." (*Ibid.*, original italics.) Interpreting section 6, the court stated: "Considered within its context, the section effectively construes the term 'costs' in the constitutional provision as excluding expenses that are recoverable from sources other than taxes." (*Ibid.*) No subvention was required where the local authority could recover its expenses through fees or assessments, not taxes.

2. *Interpretation of Section 6*

Here, the Agency contends the authority of *County of Fresno v. State of California, supra*, 53 Cal. 3d 482, should be narrowly read to cover only self-financing programs, and the Supreme Court's broad statements defining "costs" in this context read as mere dicta. It also continues to argue for a "plain meaning" reading of section 6, which it reiterates does not expressly discuss the source of funds used by an agency to pay the costs of a program before any reimbursement is sought. We disagree with both of these arguments. The correct approach is to read section 6 in light of its historical and textual context. **(4)** [HN6]The [***18] rules of constitutional interpretation require a strict construction of section 6, because constitutional limitations and restrictions on legislative powers are not to be extended to include matters not covered by the language used. (*City of San Jose v. State of California, supra*, 45 Cal. App. 4th at pp. 1816-1817.)

(5) The goals of articles XIII A and XIII B are to protect California residents from excessive taxation and government spending. (*County of Los Angeles v. State of California, supra*, 15 Cal. 4th at p. 81.) A central purpose of section 6 is to prevent the state's transfer of the cost of government from itself to the local level. (*City of Sacramento v. State of California, supra*, 50 Cal. 3d at p. 68.) **(3b)** The related goals of these enactments require us to [**276] read the term "costs" in section 6 in light of the enactment as a whole. The "costs" for which the Agency is seeking reimbursement are its deposits of tax increment financing proceeds into the Housing Fund. Those tax increment financing proceeds are normally received pursuant to the Community Redevelopment Law (§ 33000 et seq.) when, after redevelopment, the taxing agencies collect and keep the tax revenues [***19] attributable to the original assessed value and pass on to the redevelopment agency the portion of the [*986] assessed property value which exceeds the original assessment. (*Brown v. Community Redevelopment Agency, supra*, 168 Cal. App. 3d at pp. 1016-1017.) Is this the type of expenditure of tax revenues of local governments, upon state mandates which require use of such revenues, against which section 6 was designed to pro-

tect? (*County of Fresno v. State of California, supra*, 53 Cal. 3d at p. 487.)

3. *Relationship of Appropriations Limitations and Subvention*

We may find assistance in answering this question by looking to the type of appropriations limitations imposed by article XIII B. In *County of Placer v. Corin, supra*, 113 Cal. App. 3d at page 447, the court described the discipline imposed by article XIII B in this way: [HN7]"[A]rticle XIIIB does not limit the ability to expend government funds collected from all sources. Rather, the appropriations limit is based on 'appropriations subject to limitation,' which consists primarily of the authorization to expend during a fiscal year the 'proceeds of taxes.' (§ 8, subd. (a).) As to local governments, [***20] limits are placed only on the authorization to expend the proceeds of taxes levied by that entity, in addition to proceeds of state subventions (§ 8, subd. (c)); no limitation is placed on the expenditure of those revenues that do not constitute 'proceeds of taxes.' " [9]

> 9 The term of art, "appropriations subject to limitation," is defined in [HN8]article XIII B, section 8, as follows: [P] (b) " 'Appropriations subject to limitation' of an entity of local government means any authorization to expend during a fiscal year *the proceeds of taxes levied by or for that entity* and the proceeds of state subventions to that entity (other than subventions made pursuant to Section 6) exclusive of refunds of taxes." (Italics added.)

Because of the nature of the financing they receive, tax increment financing, redevelopment agencies are not subject to this type of appropriations limitations or spending caps; they do not expend any "proceeds of taxes." Nor do they raise, through tax increment financing, "*general* [***21] *revenues* for the local entity." (*County of Placer v. Corin, supra*, 113 Cal. App. 3d at p. 451, original italics.) The purpose for which state subvention of funds was created, to protect local agencies from having the state transfer its cost of government from itself to the local level, is therefore not brought into play when redevelopment agencies are required to allocate their tax increment financing in a particular manner, as in the operation of sections 33334.2 and 33334.3. (See *City of Sacramento v. State of California, supra*, 50 Cal. 3d at p. 68.) The state is not transferring to the Agency the operation and administration of a program for which it was formerly legally and financially [*987] responsible. (*County of Los Angeles v. Commission on State Mandates* (1995) 32 Cal. App. 4th 805, 817 [38 Cal. Rptr. 2d 304].) [10]

> 10 We disagree with respondents that the legislative history of sections 33334.2 and 33334.3 is of assistance here, specifically, that section 23 of the bill creating these sections provided that no appropriations were made by the act, nor was any obligation for reimbursements of local agencies created for any costs incurred in carrying out the programs created by the act. (Stats. 1976, ch. 1337, § 23, pp. 6070-6071.) As stated in *City of San Jose v. State of California, supra*, 45 Cal. App. 4th at pages 1817-1818, legislative findings regarding mandate are irrelevant to the issue to be decided by the Commission, whether a state mandate exists.

[***22] For all these reasons, we conclude the same policies which support exempting tax increment revenues from article XIII B appropriations limits also support denying reimbursement under section 6 for this particular allocation of those revenues to the Housing Fund. Tax increment financing is not within the scope of article XIII B. (*Brown v. Community Redevelopment Agency*, [**277] *supra*, 168 Cal. App. 3d at pp. 1016-1020.) Section 6 "requires subvention only when the costs in question can be recovered *solely from tax revenues*." (*County of Fresno v. State of California, supra*, 53 Cal. 3d at p. 487, original italics.) No state duty of subvention is triggered where the local agency is not required to expend its proceeds of taxes. Here, these costs of depositing tax increment revenues in the Housing Fund are attributable not directly to tax revenues, but to the benefit received by the Agency from the tax increment financing scheme, which is one step removed from other local agencies' collection of tax revenues. (§ 33000 et seq.) Therefore, in light of the above authorities, this use of tax increment financing is not a reimbursable "cost" under section 6. We therefore need not [***23] interpret any remaining portions of section 6.

DISPOSITION

The judgment is affirmed.

Work, Acting P. J., and McIntyre, J., concurred.

Appellant's petition for review by the Supreme Court was denied September 3, 1997.

TAB "19"

LEXSEE

Positive
As of: Jun 25, 2010

SAN DIEGO UNIFIED SCHOOL DISTRICT, Plaintiff and Respondent, v. COMMISSION ON STATE MANDATES, Defendant and Appellant; CALIFORNIA DEPARTMENT OF FINANCE, Real Party in Interest and Appellant.

S109125

SUPREME COURT OF CALIFORNIA

33 Cal. 4th 859; 94 P.3d 589; 16 Cal. Rptr. 3d 466; 2004 Cal. LEXIS 7079; 2004 Daily Journal DAR 9404

August 2, 2004, Filed

PRIOR HISTORY: Superior Court of San Diego County, No. GIC737638, Linda B. Quinn, Judge. Court of Appeal, Fourth Dist., Div. One, No. D038027.
San Diego Unified School Dist. v. Commission on State Mandates, 99 Cal. App. 4th 1270, 122 Cal. Rptr. 2d 614, 2002 Cal. App. LEXIS 4369 (Cal. App. 4th Dist., 2002)

DISPOSITION: Judgment of the Court of Appeal affirmed in part and reversed in part.

CASE SUMMARY:

PROCEDURAL POSTURE: The Court of Appeal of California, Fourth Appellate District, Division One, affirmed a judgment providing that plaintiff San Diego Unified School District was entitled to full reimbursement of costs related to hearings triggered by mandatory expulsion recommendations and hearings resulting from discretionary expulsion recommendations. Defendant Commission on State Mandates and real party in interest California Department of Finance appealed.

OVERVIEW: The court granted review to consider whether the hearing costs incurred as a result of the mandatory actions related to expulsions that were compelled by Cal. Educ. Code § 48915 were fully reimbursable. The court also considered whether any hearing costs incurred in carrying out expulsions that were discretionary under § 48915 were reimbursable. The court concluded that § 48915, insofar as it compelled suspension and mandated a recommendation of expulsion for certain offenses, constituted a "higher level of service" under Cal. Const. art. XIII B, § 6, and imposed a reimbursable state mandate for all resulting hearing costs, even those costs attributable to procedures required by federal law. The court also concluded that no hearing costs incurred in carrying out expulsions that were discretionary under § 48915 were reimbursable. To the extent that § 48915 made expulsions discretionary, it did not reflect a new program or a higher level of service. Moreover, Cal. Educ. Code § 48918 did not trigger any right to reimbursement because the hearing provisions that assertedly exceeded federal requirements were merely incidental to fundamental federal due process requirements.

OUTCOME: The court affirmed the judgment insofar as it provided for full reimbursement of all costs related to hearings triggered by the mandatory expulsion recommendations. The court reversed the judgment insofar as it provided for reimbursement of any costs related to hearings triggered by the discretionary expulsion recommendations.

CORE TERMS: expulsion, pupil, mandatory, school districts, reimbursement, reimbursable, level of service, state mandate, discretionary, firearm, suspension, federal law, recommendation, mandated, new program, local agencies, triggered, local governments, federal mandate, nonreimbursable, notice, incur, governing board, executive order, expelled, expel, hearing procedures, existing program, time relevant, fiscal

LexisNexis(R) Headnotes

Governments > Local Governments > Finance
Governments > State & Territorial Governments > Finance
[HN1]See Cal. Const. art. XIII B, § 6.

Education Law > Students > Disciplinary Proceedings > Notice
Education Law > Students > Disciplinary Proceedings > Right to Counsel
Education Law > Students > Discipline Methods > Expulsions
[HN2]Public school districts in California are governed by statutes that regulate the expulsion of students. Cal. Educ. Code § 48900 et seq. Whenever an expulsion recommendation is made (and before a student may be expelled), the district is required by Cal. Educ. Code § 48918 to afford the student a hearing with various procedural protections -- including notice of the hearing and the right to representation by counsel, preparation of findings of fact, notices related to any expulsion and the right of appeal, and preparation of a hearing record. Providing these procedural protections requires the district to expend funds, for which the district asserts a right to reimbursement from the state pursuant to Cal. Const. art. XIII B, § 6, and implementing legislation, Cal. Gov't Code § 17500 et seq.

Education Law > Students > Discipline Methods > Expulsions
Governments > Local Governments > Finance
Governments > State & Territorial Governments > Finance
[HN3]Cal. Educ. Code § 48915, insofar as it compels suspension and mandates a recommendation of expulsion for certain offenses, constitutes a "higher level of service" under Cal. Const. art. XIII B, § 6, and imposes a reimbursable state mandate for all resulting hearing costs -- even those costs attributable to procedures required by federal law.

Education Law > Students > Discipline Methods > Expulsions
Governments > Local Governments > Finance
Governments > State & Territorial Governments > Finance
[HN4]No hearing costs incurred in carrying out those expulsions that are discretionary under Cal. Educ. Code § 48915 -- including costs related to hearing procedures claimed to exceed the requirements of federal law -- are reimbursable. To the extent that statute makes expulsions discretionary, it does not reflect a new program or a higher level of service related to an existing program.

Education Law > Students > Disciplinary Proceedings > Due Process
Education Law > Students > Discipline Methods > Expulsions
Governments > Local Governments > Finance
[HN5]Cal. Educ. Code § 48918 does not trigger any right to reimbursement, because the hearing provisions that assertedly exceed federal requirements are merely incidental to fundamental federal due process requirements and the added costs of such procedures are de minimis. Such hearing provisions should be treated, for purposes of ruling upon a request for reimbursement, as part of the nonreimbursable underlying federal mandate and not as a state mandate.

Education Law > Students > Discipline Methods > Expulsions
[HN6]Cal. Educ. Code § 48918 specifies the right of a student to an expulsion hearing and sets forth procedures that a school district must follow when conducting such a hearing.

Education Law > Students > Disciplinary Proceedings > Time Limitations
Education Law > Students > Discipline Methods > Expulsions
[HN7]In identifying the right to a hearing, Cal. Educ. Code § 48918(a) declares that a student is "entitled" to an expulsion hearing within 30 days after the school principal determines that the student has committed an act warranting expulsion. In practical effect, this means that whenever a school principal makes such a determination and recommends to the school board that a student be expelled, an expulsion hearing is mandated.

Education Law > Students > Disciplinary Proceedings > Time Limitations
Education Law > Students > Discipline Methods > Expulsions
[HN8]See Cal. Educ. Code § 48918(a).

Education Law > Students > Disciplinary Proceedings > General Overview
Education Law > Students > Discipline Methods > Expulsions

Education Law > Students > Discipline Methods > Suspensions
[HN9]Former Cal. Educ. Code § 48915(b) compelled a school principal to immediately suspend any student found to be in possession of a firearm at school or at a school activity off school grounds and mandated a recommendation to the school district governing board that the student be expelled. The provision further required the governing board, upon confirmation of the student's knowing possession of a firearm, either to expel the student or "refer" him or her to an alternative education program housed at a separate school site.

Criminal Law & Procedure > Criminal Offenses > Controlled Substances > Possession > General Overview
Criminal Law & Procedure > Criminal Offenses > Property Crimes > Receiving Stolen Property > General Overview
Education Law > Students > Discipline Methods > Expulsions
[HN10]Former Cal. Educ. Code § 48915(c) (subsequently § 48915(d), currently § 48915(e)) recognized that a principal possesses discretion to recommend that a student be expelled for specified conduct other than firearm possession (conduct such as damaging or stealing school property or private property, using or selling illicit drugs, receiving stolen property, possessing tobacco or drug paraphernalia, or engaging in disruptive behavior). The former provision (like the current provision) further specified that the school district governing board "may" order a student expelled upon finding that the student, while at school or at a school activity off school grounds, engaged in such conduct.

Education Law > Students > Discipline Methods > Expulsions
[HN11]See former Cal. Educ. Code § 48915(c).

Education Law > Students > Discipline Methods > Expulsions
Education Law > Students > Discipline Methods > Suspensions
[HN12]See Cal. Educ. Code § 48900(f) through (l).

Education Law > Discrimination > Gender & Sex Discrimination > Sexual Harassment
Education Law > Students > Discipline Methods > Expulsions
Labor & Employment Law > Discrimination > Harassment > Sexual Harassment > Employment Practices > Discharges & Failures to Hire
[HN13]See Cal. Educ. Code § 48900.2.

Education Law > Students > Discipline Methods > Expulsions
Education Law > Students > Discipline Methods > Suspensions
[HN14]See Cal. Educ. Code § 48900.3.

Education Law > Students > Discipline Methods > Expulsions
Education Law > Students > Discipline Methods > Suspensions
[HN15]See Cal. Educ. Code § 48900.4.

Administrative Law > Judicial Review > General Overview
Civil Procedure > Remedies > Writs > Common Law Writs > Mandamus
Governments > Local Governments > Claims By & Against
[HN16]Procedures governing the constitutional requirement of reimbursement under Cal. Const. art. XIII B, § 6, are set forth in Cal. Gov't Code § 17500 et seq. The Commission on State Mandates (Commission), Cal. Gov't Code § 17525, is charged with the responsibility of hearing and deciding, subject to judicial review by an administrative writ of mandate, claims for reimbursement made by local governments or school districts. Cal. Gov't Code § 17551. Cal. Gov't Code § 17561(a) provides that the state shall reimburse each school district for all costs mandated by the state, as defined in Cal. Gov't Code § 17514. Section 17514, in turn, defines "costs mandated by the state" to mean, in part, any increased costs which a school district is required to incur as a result of any statute which mandates a new program or higher level of service of an existing program within the meaning of Cal. Const. art. XIII B, § 6. Finally, Cal. Gov't Code § 17556 sets forth circumstances in which there shall be no reimbursement, including, under § 17556(c), circumstances in which the statute or executive order implemented a federal law or regulation and resulted in costs mandated by the federal government, unless the statute or executive order mandates costs which exceed the mandate in that federal law or regulation.

Governments > Local Governments > Elections
Governments > Local Governments > Finance

Governments > State & Territorial Governments > Finance

[HN17]The intent underlying Cal. Const. art. XIII B, § 6, was to require reimbursement to local agencies for the costs involved in carrying out functions peculiar to government, not for expenses incurred by local agencies as an incidental impact of laws that apply generally to all state residents and entities.

Governments > Local Governments > Finance
Governments > Public Improvements > General Overview
Governments > State & Territorial Governments > Finance

[HN18]Simply because a state law or order may increase the costs borne by local government in providing services, this does not necessarily establish that the law or order constitutes an increased or higher level of the resulting "service to the public" under Cal. Const. art. XIII B, § 6, and Cal. Gov't Code § 17514.

Governments > Local Governments > Finance
Governments > State & Territorial Governments > Finance

[HN19]California Courts of Appeal have found a reimbursable "higher level of service" concerning an existing "program" when a state law or executive order mandates not merely some change that increases the cost of providing services, but an increase in the actual level or quality of governmental services provided.

Governments > Local Governments > Finance
Governments > State & Territorial Governments > Finance

[HN20]See Cal. Gov't Code § 17556.

Education Law > Funding > Allocation
Education Law > Students > Discipline Methods > Expulsions

[HN21]See 20 U.S.C.S. § 7151.

Governments > Local Governments > Finance
Governments > State & Territorial Governments > Finance

[HN22]For purposes of ruling upon a request for reimbursement, challenged state rules or procedures that are intended to implement an applicable federal law -- and whose costs are, in context, de minimis -- should be treated as part and parcel of the underlying federal mandate.

Education Law > Students > Discipline Methods > Expulsions
Governments > Local Governments > Finance
Governments > State & Territorial Governments > Finance

[HN23]All hearing costs incurred under Cal. Educ. Code § 48918, triggered by a school district's exercise of discretion to seek expulsion, should be treated as having been incurred pursuant to a mandate of federal law, and hence all such costs are nonreimbursable under Cal. Gov't Code § 17556(c).

SUMMARY:

CALIFORNIA OFFICIAL REPORTS SUMMARY

A school district filed a test claim with the Commission on State Mandates, asserting entitlement to reimbursement for the costs of hearings triggered by mandatory expulsion recommendations, and those hearings resulting from discretionary expulsion recommendations. After holding hearings on the district's claim, the commission determined that Ed. Code, § 48915's requirement of suspension and a mandatory recommendation of expulsion for firearm possession constituted a new program or higher level of service, and found that because costs related to some of the resulting hearing provisions set forth in Ed. Code, § 48918 (primarily various notice, right of inspection, and recording provisions) exceeded the requirements of federal due process, those additional hearing costs constituted reimbursable state-mandated costs. As to the vast majority of the remaining hearing procedures triggered by Ed. Code, § 48915's requirement of suspension and a mandatory recommendation of expulsion for firearm possession--for example, procedures governing such matters as the hearing itself and the board's decision; a statement of facts and charges; notice of the right to representation by counsel; written findings; recording of the hearing; and the making of a record of the expulsion--the commission found that those procedures were enacted to comply with federal due process requirements, and hence fell within the exception set forth in Gov. Code, § 17556, subd. (c), and did not impose a reimbursable state mandate. The commission further found that with respect to Ed. Code, § 48915's discretionary expulsions, there was no right to reimbursement for costs incurred in holding expulsion hearings, because such expulsions do not constitute a new program or higher level of service, and in any event such expulsions are not mandated by the state, but instead represent a choice by the principal and the school board. The district then brought a proceeding for an administrative writ of mandate, challenging the commission's decision. The trial court issued a writ commanding the com-

mission to render a new decision finding (i) all costs associated with hearings triggered by compulsory suspensions and mandatory expulsion recommendations are reimbursable, and (ii) hearing costs associated with discretionary expulsions are reimbursable to [*860] the limited extent that required hearing procedures exceed federal due process mandates. (Superior Court of San Diego County, No. GIC737638, Linda B. Quinn, Judge.) The Court of Appeal, Fourth Dist., Div. One, No. D038027, affirmed the judgment rendered by the trial court.

The Supreme Court affirmed the judgment of the Court of Appeal insofar as it provided for full reimbursement of all costs related to hearings triggered by the mandatory expulsion provision of Ed. Code, § 48915, but reversed the judgment insofar as it provided for reimbursement of any costs related to hearings triggered by the discretionary provision of § 48915. The court held that to the extent that § 48915 compels suspension and mandates a recommendation of expulsion for certain offenses, it constitutes a higher level of service under Cal. Const., art. XIII B, § 6, and imposes a reimbursable state mandate for all resulting hearing costs--even those costs attributable to procedures required by federal law. The immediate suspension and mandatory expulsion of a student who possesses a firearm on school property provides a higher level of service to the public in that it enhances the safety of those who attend public schools. The court held, however, that to the extent Ed. Code, § 48915, makes expulsions discretionary, it does not constitute a higher level of service related to an existing program, because provisions recognizing discretion to suspend or expel students were set forth in statutes predating 1975, when § 48915 was first enacted. Even if any of the hearing procedures set forth in Ed. Code, § 48918, and applicable to mandatory and discretionary and mandatory expulsions under Ed. Code, § 48915, constitute a higher level of service, the statute does not trigger any right to reimbursement. The hearing procedures of Ed. Code, § 48918, should be considered to have been adopted to implement a federal due process mandate and hence are nonreimbursable under Cal. Const., art. XIII B, § 6, and Gov. Code, § 17556, subd. (c). (Opinion by George, C. J., expressing the unanimous view of the court.)

HEADNOTES

CALIFORNIA OFFICIAL REPORTS HEADNOTES
Classified to California Digest of Official Reports

(1) **State of California § 11--Fiscal Matters--Reimbursable State Mandate--Higher Level of Service--Mandatory Suspension or Expulsion of Student.**--Ed. Code, § 48915, insofar as it compels suspension and mandates a recommendation of expulsion for certain offenses, constitutes a higher level of service under Cal. Const., art. XIII B, § 6, and imposes a reimbursable state mandate for all resulting hearing costs--even those costs attributable to procedures required by federal law. [*861]

(2) **State of California § 11--Fiscal Matters--Nonreimbursable State Mandate--No Higher Level of Service--Discretionary Suspension or Expulsion of Student--Hearing Procedures Excepted From Reimbursement as Federal Mandate.**--No hearing costs incurred in carrying out expulsions that are discretionary under Ed. Code, § 48915--including costs related to hearing procedures claimed to exceed the requirements of federal law--are reimbursable. To the extent that statute makes expulsions discretionary, it does not reflect a new program or a higher level of service related to an existing program. Moreover, even if the hearing procedures set forth in Ed. Code, § 48918, constitute a new program or higher level of service, the statute does not trigger any right to reimbursement, because the hearing provisions that assertedly exceed federal requirements are merely incidental to fundamental federal due process requirements and the added costs of such procedures are de minimis. Such hearing provisions should be treated, for purposes of ruling upon a request for reimbursement, as part of the nonreimbursable underlying federal mandate and not as a state mandate.

[7 Witkin, Summary of Cal. Law (9th ed. 1988) Constitutional Law, § 549; 9 Witkin, Summary of Cal. Law (9th ed. 1989) Taxation, § 123A.]

(3) **Schools § 61--Students--Suspension or Expulsion--Expulsion Hearing Mandated.**--In identifying the right to a hearing, Ed. Code, § 48918, subd. (a), declares that a student is entitled to an expulsion hearing within 30 days after the school principal determines that the student has committed an act warranting expulsion. In practical effect, this means that whenever a school principal makes such a determination and recommends to the school board that a student be expelled, an expulsion hearing is mandated.

(4) **Schools § 61--Parents and Students--Suspension or Expulsion--Mandatory and Discretionary Expulsion.**--Discrete subdivisions of Ed. Code, § 48915, address circumstances in which a principal must recommend to the school board that a student be expelled, and circumstances in which a principal may recommend that a student be expelled.

(5) **State of California § 11--Fiscal Matters--Reimbursable State Mandate.**--Procedures governing the constitutional requirement of reimbursement

under Cal. Const., art. XIII B, § 6, are set forth in Gov. Code, § 17500 et seq. The Commission on State Mandates (Gov. Code, § 17525) is charged with the responsibility of hearing and deciding, subject to judicial review by an administrative writ of mandate, claims for reimbursement made by local governments or school districts. (Gov. [*862] Code, § 17551.) Gov. Code, § 17561, subd. (a), provides that the state shall reimburse each school district for all costs mandated by the state, as defined in Gov. Code, § 17514. Section 17514, in turn, defines costs mandated by the state to mean, in relevant part, any increased costs which a school district is required to incur as a result of any statute which mandates a new program or higher level of service of an existing program within the meaning of Cal. Const., art. XIII B, § 6. Finally, Gov. Code, § 17556, sets forth circumstances in which there shall be no reimbursement, including, under Gov. Code, § 17556, subd. (c), circumstances in which the statute or executive order implemented a federal law or regulation and resulted in costs mandated by the federal government, unless the statute or executive order mandates costs which exceed the mandate in that federal law or regulation.

(6) State of California § 11--Fiscal Matters--Reimbursable State Mandate--New Program or Higher Level of Service--Alternative Tests.--The requirement for increased or higher level of service under Cal. Const., art. XIII B, § 6, is directed to state mandated increases in the services provided by local agencies in existing programs. The Constitution's phrase "new program or higher level of service" refers to either of two alternatives--(1) programs that carry out the governmental function of providing services to the public, or (2) laws which, to implement a state policy, impose unique requirements on local governments and do not apply generally to all residents and entities in the state.

(7) State of California § 11--Fiscal Matters--Reimbursable State Mandate--Increase in Costs.--Simply because a state law or order may increase the costs borne by local government in providing services does not necessarily establish that the law or order constitutes an increased or higher level of the resulting service to the public under Cal. Const., art. XIII B, § 6, and Gov. Code, § 17514.

(8) State of California § 11--Fiscal Matters--Reimbursable State Mandate--Increase in Level or Quality of Governmental Services Provided.--A reimbursable higher level of service concerning an existing program exists when a state law or executive order mandates not merely some change that increases the cost of providing services, but an increase in the actual level or quality of governmental services provided.

(9) State of California § 11--Fiscal Matters--Reimbursable State Mandate--Higher Level of Service--Mandatory Suspension and Expulsion for Student Firearm Possession.--The statutory requirements of Ed. Code, § 48915--immediate suspension and mandatory recommendation of expulsion for students who possess a firearm, and the limitation [*863] upon the ensuing options of the school board (expulsion or referral)--provide a "higher level of service" to the public under the commonly understood sense of that term: (i) the requirements are new in comparison with the preexisting scheme; and (ii) the requirements were intended to provide an enhanced service to the public--safer schools for the vast majority of students.

(10) State of California § 11--Fiscal Matters--Reimbursable State Mandate--Higher Level of Service--Mandatory Suspension and Expulsion for Student Firearm Possession.--Providing public schooling clearly constitutes a governmental function, and enhancing the safety of those who attend such schools constitutes a service to the public. The mandatory suspension and expulsion recommendation requirements of Ed. Code, § 48915, together with restrictions placed upon a district's resolution of such a case, constitute an increased or higher level of service to the public under Cal. Const., art. XIII B, § 6, and the implementing statutes.

(11) State of California § 11--Fiscal Matters--Reimbursable State Mandate--Higher Level of Service--Mandatory Suspension and Expulsion of Student--State Requires School District to Incur Costs of an Expulsion Hearing.--In the absence of the operation of Ed. Code, § 48915's mandatory provision (specifically, compulsory immediate suspension and a mandatory expulsion recommendation), a school district would not automatically incur the due process hearing costs that are mandated by federal law and codified in Ed. Code, § 48918. Instead, a district would incur such hearing costs only if a school principal first were to exercise discretion to recommend expulsion. Accordingly, in its mandatory aspect, Ed. Code, § 48915, appears to constitute a state mandate in that it establishes conditions under which the state, rather than local officials, has made the decision requiring a school district to incur the costs of an expulsion hearing.

(12) Schools § 61--Parents and Students--Suspension or Expulsion--Expulsion Hearings--Not Federal Mandate.--Ed. Code, § 48918, sets out requirements for expulsion hearings that must be held when a district seeks to expel a student--but neither § 48918 nor federal law requires that any such expulsion recommendation be made in the first place. Section 48918 does not imple-

ment any federal mandate that school districts hold such hearings and incur such costs whenever a student is found in possession of a firearm. Accordingly, the so-called exception to reimbursement described in Gov. Code, § 17556, subd. (c), is inapplicable in this context of a mandatory hearing. [*864]

(13) State of California § 11--Fiscal Matters--Reimbursable State Mandate--Higher Level of Service--Mandatory Suspension and Expulsion of Student--Hearing Costs Triggered by Mandatory Expulsion.--When it is state law (Ed. Code, § 48915's mandatory expulsion provision), and not federal due process law, that requires a school district to take steps that in turn require it to incur hearing costs, the hearing costs incurred by a school district, triggered by the mandatory provision of Ed. Code, § 48915, do not constitute a nonreimbursable federal mandate. Under the statutes in effect through mid-1994, all such hearing costs--those designed to satisfy the minimum requirements of federal due process, and those that may exceed those requirements--were, with respect to the mandatory expulsion provision of § 48915, state mandated costs, fully reimbursable by the state.

(14) State of California § 11--Fiscal Matters--Reimbursable State Mandate--Higher Level of Service--Mandatory Suspension or Expulsion of Student.--All hearing costs triggered by Ed. Code, § 48915's mandatory expulsion provision constitute reimbursable state mandated expenses under the statutes in effect through mid-1994. 20 U.S.C. § 7151, or its predecessor, 20 U.S.C. § 8921, may lead to a different conclusion when applied to versions of Ed. Code, § 48915, effective in years 1995 and thereafter.

(15) State of California § 11--Fiscal Matters--Reimbursable State Mandate--New Program or Higher Level of Service--Discretionary Suspension or Expulsion of Student: Schools § 61--Parents and Students--Discretionary Suspension or Expulsion--Cost of Proceedings Not Reimbursable.--The discretionary expulsion provision of Ed. Code, § 48915, does not constitute a new program or higher level of service related to an existing program, under Cal. Const., art. XIII B, § 6, because provisions recognizing discretion to suspend or expel students were set forth in statutes predating 1975, when the provision was first enacted.

(16) Schools § 61--Parents and Students--Suspension or Expulsion--Hearing Procedures--Federal Due Process Mandate--Nonreimbursable State Mandate.--All hearing procedures set forth in Ed. Code, § 48918, properly should be considered to have been adopted to implement a federal due process mandate, and hence all such hearing costs are nonreimbursable under Cal. Const., art. XIII B, § 6, and Government Code § 17557, subd. (c).

(17) State of California § 11--Fiscal Matters--Reimbursable State Mandate--Implementation of Federal Law--Discretionary Suspension or Expulsion of a Student: Schools § 61--Parents and Students--Discretionary Suspension or Expulsion--Federal Mandate to Provide a Hearing.--An [*865] initial discretionary decision to seek expulsion of a student in turn triggers a federal constitutional mandate to provide an expulsion hearing. The Legislature, in adopting specific statutory procedures under Ed. Code, § 48918, to comply with the general federal mandate, reasonably articulated various incidental procedural protections. These protections are designed to make the underlying federal right enforceable and to set forth procedural details that were not expressly articulated in the case law establishing the respective rights; viewed singly or cumulatively, they did not significantly increase the cost of compliance with the federal mandate. For purposes of ruling upon a claim for reimbursement, such incidental procedural requirements, producing at most de minimis added cost, should be viewed as part and parcel of the underlying federal mandate, and hence nonreimbursable under Gov. Code, § 17556, subd. (c).

(18) Schools § 61--Parents and Students--Discretionary Suspension or Expulsion--Federal Due Process Requirements--Not Reimbursable As State Mandate.--All hearing costs incurred under Ed. Code, § 48918, triggered by a school district's exercise of discretion to seek expulsion, should be treated as having been incurred pursuant to a mandate of federal law, and hence all such costs are nonreimbursable under Gov. Code, § 17556, subd. (c).

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JUDGES: George, C. J., expressing the unanimous view of the court.

OPINION BY: GEORGE [***467]

OPINION

[**591] **GEORGE, C. J.**--Article XIII B, section 6, of the California Constitution provides: [HN1]"Whenever the Legislature or any state agency mandates a new program or higher level of service on any local government, the State shall provide a subvention of funds to reimburse such local government for the costs of such program or increased level of service ... ." [1] (Hereafter article XIII B, section 6.)

> 1 The provision continues: "except that the Legislature may, but need not, provide such subvention of funds for the following mandates: [¶] (a) Legislative mandates requested by the local agency affected; [¶] (b) Legislation defining a new crime or changing an existing definition of a crime; or [¶] (c) Legislative mandates enacted prior to January 1, 1975, or executive orders or regulations initially implementing legislation enacted prior to January 1, 1975." (Cal. Const., art. XIII B, § 6.)

Plaintiff San Diego Unified School District (District), like all other [HN2]public school districts in the state, is, and was at the time relevant in this proceeding, governed by statutes that regulate the expulsion of students. (Ed. Code, § 48900 et seq.) Whenever an expulsion recommendation is made (and before a student may be expelled), the District is required by Education Code section 48918 to afford the student a hearing with various procedural protections--including notice of the hearing and the right to representation by [***468] counsel, preparation of findings of fact, notices related to any expulsion and the right of appeal, and preparation of a hearing record. Providing these procedural protections requires the District to expend funds, for which the District asserts a right to reimbursement from the state pursuant to article XIII B, section 6, and implementing legislation, Government Code section 17500 et seq.

We granted review to consider two questions: (1) Are the hearing costs incurred as a result of the *mandatory* actions related to expulsions that are compelled by Education Code section 48915 fully reimbursable--or are those hearing costs reimbursable only to the extent such costs are attributable to hearing procedures that exceed the procedures required by federal law? (2) Are any hearing costs incurred in carrying out expulsions that are *discretionary* under Education Code section 48915 reimbursable? After we granted review and filed our decision in *Department of Finance v. Commission on State Mandates (Kern High School Dist.)* (2003) 30 Cal.4th 727 [134 Cal. Rptr. 2d 237, 68 P.3d 1203] (*Kern High School Dist.*), we added the following preliminary question to be addressed: Do the Education Code [*867] statutes cited above establish a "new program" or "higher level of service" under article XIII B, section 6? Finally, we also asked the parties to brief the effect of the decision in *Kern High School Dist., supra,* 30 Cal.4th 727, on the present case.

(1) We conclude that Education Code section 48915, [HN3]insofar as it compels suspension and mandates a recommendation of expulsion for certain offenses, constitutes a "higher level of service" under article XIII B, section 6, and imposes a reimbursable state mandate for *all* resulting hearing costs--even those costs attributable to procedures required by federal law. In this respect, we shall affirm the judgment of the Court of Appeal.

(2) We also conclude that [HN4]*no* hearing costs incurred in carrying out those expulsions that are *discretionary* under Education Code section 48915--including costs related to hearing procedures claimed to exceed the requirements of federal law--are reimbursable. As we shall explain, to the extent that statute makes expulsions discretionary, it does not reflect a new program or a higher level of service related to an existing program. Moreover, even if the hearing *procedures* set forth in Education Code section *48918* constitute a new program or higher level of service, we conclude that [HN5]*this* statute does not trigger any right to reimbursement, because the hearing provisions that assertedly exceed federal requirements are merely incidental to fundamental federal due process requirements and the added costs of such procedures are de minimis. For these reasons, we conclude such hearing provisions should be treated, for purposes of ruling upon a request for reimbursement, as part of the nonreimbursable underlying *federal* mandate and not as a state mandate. Accordingly, we shall reverse the judgment of the Court of Appeal insofar as it compels reimbursement [**592] of any costs incurred pursuant to discretionary expulsions.

I

A. *Education Code sections 48918 and 48915*

We first describe the relevant provisions of two statutes--Education Code sections 48918 and

48915--pertaining to the expulsion of students from public schools.

Education Code section 48918 [HN6]specifies the right of a student to an expulsion hearing and sets forth procedures that a school district must [*868] follow when conducting [***469] such a hearing. (Stats. 1990, ch. 1231, § 2, pp. 5136-5139.) [2]

2 For purposes of our present inquiry, Education Code, section 48918, at the time relevant here (mid-1993 through mid-1994) read essentially as it had for the prior decade, and as it has in the ensuing decade. That provision first was enacted in 1975 (see Stats. 1975, ch. 1253, § 4, pp. 3277-3278) as Education Code, former section 10608. (This enactment apparently was a response to the United States Supreme Court's decision in *Goss v. Lopez* (1975) 419 U.S. 565, 581 [42 L. Ed. 2d 725, 95 S. Ct. 729] (*Goss*) [recognizing due process requirements applicable to public school students who are suspended for more than 10 days].) The statute was renumbered as Education Code, former section 48914 in 1976 (Stats. 1976, ch. 1010, § 2, pp. 3589-3590) and was substantially augmented in 1977 (Stats. 1977, ch. 965, § 24, pp. 2924-2926). After relatively minor amendments in 1978 and 1982, the section in 1983 was substantially restated, further augmented, and renumbered as Education Code section 48918 (Stats. 1983, ch. 498, § 91, p. 2118). Amendments adopted in 1984 and 1988 made relatively minor changes, and further similar modifications were made in 1990, reflecting the version of the statute here at issue. Subsequent amendments in 1995, 1996, 1998, and 1999 made further changes that are irrelevant to the issue presented in the case now before us.

[HN7](3) In identifying the right to a hearing, subdivision (a) of Education Code, section 48918, declares that a student is "entitled" to an expulsion hearing within 30 days after the school principal determines that the student has committed an act warranting expulsion. [3] *In practical effect, this means that whenever a school principal makes such a determination and recommends to the school board that a student be expelled, an expulsion hearing is mandated.* [4]

3 The provision reads: [HN8]"The pupil shall be entitled to a hearing to determine whether the pupil should be expelled. An expulsion hearing shall be held within 30 schooldays after the date the principal or the superintendent of schools determines that the pupil has committed any of the acts enumerated in Section 48900 ... ." (Ed. Code, § 48918, subd. (a).). (Subdivision (b) of section 48900 presently includes--as it did at the time relevant here--the offense of possession of a firearm.)

4 Of course, if a student does not invoke his or her entitlement to such a hearing, and instead waives the right to such a hearing, the hearing need not be held.

In specifying the substantive and procedural requirements for such an expulsion hearing, Education Code section 48918 sets forth rules and procedures, some of which, the parties agree, codify requirements of federal due process and some of which may exceed those requirements. [5] These rules and procedures govern, among other things, notice of a hearing and the right to representation by counsel, preparation of findings of fact, notices related to the expulsion and the right of appeal, and preparation of a hearing record. (See § 48918, subds. (a) through former subd. (j), currently subd. (k).)

5 See *Goss, supra*, 419 U.S. 565, 581; *Gonzales v. McEuen* (C.D.Cal. 1977) 435 F. Supp. 460, 466-467 (concluding that former Education Code section 10608 [current § 48918] met federal due process requirements pertaining to expulsions from public schools); 7 Witkin, Summary of California Law (9th ed. 1988), Constitutional Law, section 549, page 754 (noting that Education Code section 48918 and related legislation were enacted in response to the decision in *Goss*).

[*869] (4) The second statute at issue in this matter is Education Code section 48915. Discrete subdivisions of this statute address circumstances in which a principal *must* recommend to the school board that a student be expelled, and circumstances in which a principal *may* recommend that a student be expelled.

First, there is what the parties characterize as the "mandatory expulsion provision," Education Code section 48915, former subdivision (b). As it read during the time relevant in this proceeding (mid-1993 [***470] through mid-1994), [HN9]this subdivision (1) compelled a school principal to *immediately suspend* any [**593] student found to be in possession of a firearm at school or at a school activity off school grounds, and (2) mandated a *recommendation* to the school district governing board that the student be *expelled*. The provision further required the governing board, upon confirmation of the student's knowing possession of a firearm, either to expel the student or "refer" him or her to an alternative education program housed at a separate school site. [6] (Compare this former provision with *current* Ed. Code, § 48915, subds. (c), (d).) [7]

6 An earlier and similar, albeit broader, version of the provision--extending not only to possession of firearms but also to possession of explosives and certain knives--existed briefly and was effective for approximately two and one-half months in late 1993. That initial statute, former section 48915, subdivision (b) (as amended Stats. 1993, ch. 1255, § 2, pp. 7284-7285), which was effective only from October 11, 1993 through December 31, 1993, provided: "The principal or the superintendent of schools shall immediately suspend pursuant to Section 48911, and shall recommend to the governing board the expulsion of, any pupil found to be in possession of a firearm, knife of no reasonable use to the pupil, or explosive at school or at a school activity off school grounds. The governing board shall expel that pupil or, as an alternative, refer that pupil to an alternative education program, whenever the principal or the superintendent of schools and the governing board confirm that: [¶] (1) The pupil was in knowing possession of the firearm, knife, or explosive. [¶] (2) Possession of the firearm, knife of no reasonable use to the pupil, or explosive was verified by an employee of the school district. [¶] (3) There was no reasonable cause for the pupil to be in possession of the firearm, knife, or explosive."

As subsequently amended by Statutes 1993, chapter 1256, section 2, pages 7286-7287, effective January 1, 1994, Education Code section 48915, former subdivision (b), read: "The principal or the superintendent of schools shall immediately suspend, pursuant to Section 48911, any pupil found to be in possession of a firearm at school or at a school activity off school grounds and shall recommend expulsion of that pupil to the governing board. The governing board shall expel that pupil or refer that pupil to a program of study that is appropriately prepared to accommodate students who exhibit discipline problems and is not provided at a comprehensive middle, junior, or senior high school or housed at the schoolsite attended by the pupil at the time the expulsion was recommended to the school board, whenever the principal or superintendent of schools and the governing board confirm the following: [¶] (1) The pupil was in knowing possession of the firearm. [¶] (2) An employee of the school district verifies the pupil's possession of the firearm."

7 The current subdivisions of Education Code section 48915 set forth a list of mandatory expulsion conduct broader than that set forth in former subdivision (b), and require a school board both to *expel and refer* to other institutions all students found to have committed such conduct. The present subdivisions read: "(c) The principal or superintendent of schools shall immediately suspend, pursuant to Section 48911, and shall recommend expulsion of a pupil that he or she determines has committed any of the following acts at school or at a school activity off school grounds: [¶] (1) Possessing, selling, or otherwise furnishing a firearm. This subdivision does not apply to an act of possessing a firearm if the pupil had obtained prior written permission to possess the firearm from a certificated school employee, which is concurred in by the principal or the designee of the principal. This subdivision applies to an act of possessing a firearm only if the possession is verified by an employee of a school district. [¶] (2) Brandishing a knife at another person. [¶] (3) Unlawfully selling a controlled substance listed in Chapter 2 (commencing with Section 11053) of Division 10 of the Health and Safety Code. [¶] (4) Committing or attempting to commit a sexual assault as defined in subdivision (n) of Section 48900 or committing a sexual battery as defined in subdivision (n) of Section 48900. [¶] (5) Possession of an explosive. [¶] (d) The governing board shall order a pupil expelled upon finding that the pupil committed an act listed in subdivision (c), and shall refer that pupil to a program of study that meets all of the following conditions: [¶] (1) Is appropriately prepared to accommodate pupils who exhibit discipline problems. [¶] (2) Is not provided at a comprehensive middle, junior, or senior high school, or at any elementary school. [¶] (3) Is not housed at the schoolsite attended by the pupil at the time of suspension." (Stats. 2001, ch. 116 § 1.)

[*870] [***471] This provision, as it read at the time relevant here, did not mandate expulsion per se [8]--but it *did* require immediate suspension followed by a mandatory expulsion recommendation (and it provided that a student found by the governing board to have possessed [**594] a firearm would be removed from the school site by limiting disposition to either expulsion or "referral" to an alternative school). Moreover, as noted above, whenever expulsion is recommended a student has a right to an expulsion hearing. Accordingly, it is appropriate to characterize the former provision as *mandating* immediate suspension, a recommendation of expulsion, *and hence, an expulsion hearing.* For convenience, we accept the parties' description of this aspect of Education Code section 48915 as constituting a "mandatory expulsion provision."

8 As the Department of Finance observed in an August 22, 1994, communication to the Commission on State Mandates in this matter, "nothing in [Education Code section 48915] ... requires a district governing board or a county board of education to expel a pupil," and even "unauthorized and knowing possession of a firearm, does not result in mandated expulsion. Section 48915 subdivision (b) provides for the choice of the governing board to either expel the pupil in possession of a firearm, or refer the pupil to an alternative program of study. ..."

The second aspect of Education Code section 48915 relevant here consists of what we shall call the "discretionary expulsion provision." (*Id.*, former subd. (c), subsequently subd. (d), currently subd. (e).) During the period relevant in this proceeding (as well as currently), [HN10]this subdivision of Education Code section 48915 recognized that a principal possesses *discretion* to recommend that a student be expelled for specified conduct other than firearm possession (conduct such as damaging or stealing school property or private property, using or selling illicit drugs, receiving stolen property, possessing tobacco or drug paraphernalia, or engaging in disruptive behavior). The former provision (like the current provision) further specified that the school district governing board "may" order a student expelled upon finding that the [*871] student, while at school or at a school activity off school grounds, engaged in such conduct. [9]

9 Education Code, section 48915, former subdivision (c) (as amended Stats. 1992, ch. 909, § 3, p. 4226; amended and redesignated as former subd. (d) by Stats. 1993, ch. 1255, § 2, pp. 7284-7285; further amended Stats. 1993, ch. 1256, § 2, p. 7287, and Stats. 1994, ch. 1198, § 7, p. 7271) provided, at the time relevant here: [HN11]"Upon recommendation by the principal, superintendent of schools, or by a hearing officer or administrative panel appointed pursuant to subdivision (d) of Section 48918, the governing board *may* order a pupil expelled upon finding that the pupil violated subdivision (f), (g), (h), (i), (j), (k), or (l) of Section 48900, or Section 48900.2 or 48900.3, and either of the following: [¶] (1) That other means of correction are not feasible or have repeatedly failed to bring about proper conduct. [¶] (2) That due to the nature of the violation, the presence of the pupil causes a continuing danger to the physical safety of the pupil or others." (Italics added.)

At the time relevant here, subdivisions (f) through (l) of Education Code section 48900 (as amended Stats. 1992, ch. 909, § 1, pp. 4224-4225; Stats. 1994, ch. 1198, § 5, pp. 7269-7270) provided: [HN12]"A pupil shall *not* be suspended from school or recommended for expulsion *unless* the superintendent or the principal of the school in which the pupil is enrolled determines that the pupil has: [¶] ... [¶] (f) Caused or attempted to cause damage to school property or private property. [¶] (g) Stolen or attempted to steal school property or private property. [¶] (h) Possessed or used tobacco, or any products containing tobacco or nicotine products ... . However, this section does not prohibit use or possession by a pupil of his or her own prescription products. [¶] (i) Committed an obscene act or engaged in habitual profanity or vulgarity. [¶] (j) Had unlawful possession of, or unlawfully offered, arranged, or negotiated to sell any drug paraphernalia, as defined in Section 11014.5 of the Health and Safety Code. [¶] (k) Disrupted school activities or otherwise willfully defied the valid authority of supervisors, teachers, administrators, school officials, or other school personnel engaged in the performance of their duties. [¶] (l) Knowingly received stolen school property or private property." (Italics added.)

At the time relevant here, Education Code, section 48900.2 (Stats. 1992, ch. 909, § 2, p. 4225) provided: [HN13]"In addition to the reasons specified in Section 48900, a pupil may be suspended from school or recommended for expulsion if the superintendent or the principal of the school in which the pupil is enrolled determines that the pupil has committed sexual harassment as defined in Section 212.5. [¶] For the purposes of this chapter, the conduct described in Section 212.5 must be considered by a reasonable person of the same gender as the victim to be sufficiently severe or pervasive to have a negative impact upon the individual's academic performance or to create an intimidating, hostile, or offensive educational environment. This section shall not apply to pupils enrolled in kindergarten and grades 1 to 3, inclusive."

Education Code, section 48900.3 (Stats. 1994, ch. 1198, § 6, p. 7270), at the time relevant here, provided: [HN14]"In addition to the reasons specified in Sections 48900 and 48900.2, a pupil in any of grades 4 to 12, inclusive, may be suspended from school or recommended for expulsion if the superintendent or the principal of the school in which the pupil is enrolled determines that the pupil has caused, attempted to cause, threatened to cause, or participated in an act of,

hate violence, as defined in subdivision (e) of [former] Section 33032.5 [current section 233]."

In addition, Education Code, section 48900.4 (Stats. 1994, ch. 1017, § 1, p. 6196) provided, at the time relevant here: [HN15]"In addition to the grounds specified in Sections 48900 and 48900.2, a pupil enrolled in any of grades 4 to 12, inclusive, may be suspended from school or recommended for expulsion if the superintendent or the principal of the school in which the pupil is enrolled determines that the pupil has intentionally engaged in harassment, threats, or intimidation, directed against a pupil or group of pupils, that is sufficiently severe or pervasive to have the actual and reasonably expected effect of materially disrupting classwork, creating substantial disorder, and invading the rights of that pupil or group of pupils by creating an intimidating or hostile educational environment."

(All of these current provisions--sections 48915, subdivision (e), 48900, 48900.2, 48900.3, and 48900.4--read today substantially the same as they did at the time relevant in the present case.)

[*872] [**595]

[***472] B. *Proceedings Under Government Code section 17500 et seq.*

[HN16](5) Procedures governing the constitutional requirement of reimbursement under article XIII B, section 6, are set forth in Government Code section 17500 et seq. The Commission on State Mandates (Commission) (Gov. Code, § 17525) is charged with the responsibility of hearing and deciding, subject to judicial review by an administrative writ of mandate, claims for reimbursement made by local governments or school districts. (Gov. Code, § 17551.) Government Code section 17561, subdivision (a), provides that the "state shall reimburse each ... school district for all 'costs mandated by the state,' as defined in section 17514." Government Code section 17514, in turn, defines "costs mandated by the state" to mean, in relevant part, "any increased costs which a ... school district is required to incur ... as a result of any statute ... which mandates a new program or higher level of service of an existing program within the meaning of Section 6 of Article XIIIB of the California Constitution." Finally, Government Code section 17556 sets forth circumstances in which there shall be no reimbursement, including, under subdivision (c), circumstances in which "[t]he statute or executive order implemented a federal law or regulation and resulted in costs mandated by the federal government, unless the statute or [***473] executive order mandates costs which exceed the mandate in that federal law or regulation."

In March 1994, the District filed a "test claim" with the Commission, asserting entitlement to reimbursement for the costs of hearings provided with respect to both categories of cases described above--that is, those hearings triggered by mandatory expulsion recommendations, and those hearings resulting from discretionary expulsion recommendations. (See Gov. Code, § 17521; *Kinlaw v. State of California* (1991) 54 Cal.3d 326, 331-333 [285 Cal. Rptr. 66, 814 P.2d 1308].) [10] The District sought reimbursement for costs incurred between July 1, 1993, and June 30, 1994, under statutes effective through the latter date.

10 As observed by amicus curiae California School Boards Association, a "test claim is like a class action--the Commission's decision applies to all school districts in the state. If the district is successful, the Commission goes to the Legislature to fund the statewide costs of the mandate for that year and annually thereafter as long as the statute is in effect."

In August 1998, after holding hearings on the District's claim (as amended in April 1995, to reflect legislation that became effective in 1994), the Commission issued a "Corrected Statement of Decision" in which it determined that Education Code section 48915's requirement of suspension and a [*873] mandatory recommendation of expulsion for firearm possession constituted a "new program or higher level of service," and found that because costs related to some of the resulting hearing provisions set forth in Education Code section 48918 (primarily various notice, right of inspection, and recording provisions) exceeded the requirements of federal due process, those additional hearing costs constituted reimbursable state-mandated costs. [11] As to the vast majority of the remaining [**596] hearing procedures triggered by Education Code section 48915's requirement of suspension and a mandatory recommendation of expulsion for firearm possession--for example, procedures governing such matters as the hearing itself and the board's decision; a statement of facts and charges; notice of the right to representation by counsel; written findings; recording of the hearing; and the making of a record of the expulsion--the Commission found that those procedures were enacted to comply with federal due process requirements, and hence fell within the exception set forth in Government Code section 17556, subdivision (c), and [***474] did not impose a reimbursable state mandate. The Commission further found that with respect to Education Code section 48915's *discretionary* expulsions, there was no right to reimbursement for costs incurred in holding expulsion hearings, because such expulsions do not constitute a new program or higher level of service, and in any event such expulsions are not *mandated* by the state, but in-

stead represent a choice by the principal and the school board.

> 11 The Commission concluded that the costs incurred in providing the following state-mandated procedures under Education Code section 48918 exceeded federal due process requirements, and were reimbursable: (i) adoption of rules and regulations pertaining to pupil expulsions (§ 48918, first par. & *passim*); (ii) inclusion in the notice of hearing of (a) a copy of the disciplinary rules of the District, (b) a notice of the parents' obligation to notify a new school district, upon enrollment, of the pupil's expulsion, and (c) a notice of the opportunity to inspect and obtain copies of all documents to be used at the hearing (§ 48918, subd. (b)); (iii) allowing, upon request, the pupil or parent to inspect and obtain copies of the documents to be used at the hearing (§ 48918, subd. (b)); (iv) sending of written notice concerning (a) any decision to expel or suspend the enforcement of an expulsion order during a period of probation, (b) the right to appeal the expulsion to the county board of education, and (c) the obligation of the parent to notify a new school district, upon enrollment, of the pupil's expulsion (§ 48918, former subd. (i), currently subd. (j)); (v) maintenance of a record of each expulsion, including the cause thereof (§ 48918, former subd. (j), currently subd. (k)); and (vi) the recording of expulsion orders and the causes thereof in the pupil's mandatory interim record (and, upon request, the forwarding of this record to any school in which the pupil subsequently enrolls) (§ 48918, former subd. (j), currently subd. (k)).

In October 1999, the District brought this proceeding for an administrative writ of mandate challenging the Commission's decision. The trial court issued a writ commanding the Commission to render a new decision finding (i) all costs associated with hearings triggered by compulsory suspensions and mandatory expulsion recommendations are reimbursable, and (ii) hearing costs associated with discretionary expulsions are reimbursable to the limited [*874] extent that required hearing procedures exceed federal due process mandates. The Commission (defendant) and the Department of Finance (real party in interest, hereafter Department) appealed, and the Court of Appeal affirmed the judgment rendered by the trial court.

II

A. *Costs associated with hearings triggered by compulsory suspensions and mandatory expulsion recommendations*

1. *"New program or higher level of service"?*

We address first the issue that we asked the parties to brief: Does Education Code section 48915, former subdivision (b) (current subds. (c) & (d)), which mandated suspension and an expulsion recommendation for those students who possess a firearm at school or at a school activity off school grounds, and which also required a school board, if it found the charge proved, either to expel or to "refer" such a student to an alternative educational program housed at a separate school site, constitute a "new program or higher level of service" under article XIII B, section 6 of the state Constitution, and under Government Code section 17514?

We addressed the meaning of the Constitution's phrase "new program or higher level of service" in *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46 [233 Cal. Rptr. 38, 729 P.2d 202] (*County of Los Angeles*). That case concerned whether local governments are entitled to reimbursement for costs incurred in complying with legislation that required local agencies to provide the same increased level of workers' compensation benefits for their employees as private individuals or organizations were required to provide for their employees. We stated:

> **(6)** "Looking at the language of [article XIIIB, section 6] then, it seems clear that by itself the term 'higher level of service' is meaningless. It must be read in conjunction with the predecessor phrase 'new program' to give it meaning. Thus read, it is apparent that the subvention requirement for increased or higher level of service is directed to state mandated increases in the services provided by local agencies in existing 'programs.' But the term 'program' itself is not defined in article XIIIB. What programs [**597] then did the electorate have in mind when section 6 was adopted? We conclude that the drafters and the electorate had in mind the commonly understood meanings of the term--[(1)] programs that carry out the governmental function of providing services to the public, or [(2)] laws which, to implement a state policy, impose unique requirements on local governments and do not apply generally to all residents [***475] and entities in the state." (*County of Los Angeles, supra*, 43 Cal.3d 46, 56.)

[*875] We continued in *County of Los Angeles*: "The concern which prompted the inclusion of section 6 in article XIIIB was the perceived attempt by the state to enact legislation or adopt administrative orders creating programs to be administered by local agencies, thereby transferring to those agencies the fiscal responsibility for providing services which the state believed should be extended to the public. In their ballot arguments, the proponents of article XIIIB explained section 6 to the

voters: 'Additionally, this measure: (1) Will not allow the state government to *force programs* on local governments without the state paying for them.' (Ballot Pamp., Proposed Amend. to Cal. Const. with arguments to voters, Spec. Statewide Elec. (Nov. 6, 1979) p. 18. Italics added.) In this context the phrase 'to force programs on local governments' confirms that [HN17]*the intent underlying section 6 was to require reimbursement to local agencies for the costs involved in carrying out functions peculiar to government, not for expenses incurred by local agencies as an incidental impact of laws that apply generally to all state residents and entities.*" (*County of Los Angeles, supra,* 43 Cal.3d 46, 56-57, italics added.)

It was clear in *County of Los Angeles, supra,* 43 Cal.3d 46, that the law at issue did not meet the second test for a "program or higher level of service"--it did not implement a state policy by imposing unique requirements upon local governments, but instead applied workers' compensation contribution rules generally to all employers in the state. Nor, we held, did the law requiring local agencies to shoulder a general increase in workers' compensation benefits amount to a reimbursable "program or higher level of service" under the first test described above. (*Id.,* at pp. 57-58.) The law increased the cost of employing public servants, but it did not in any tangible manner increase the level of service provided by those employees to the public.

We reaffirmed and applied the test set out in *County of Los Angeles, supra,* 43 Cal.3d 46, in *Lucia Mar Unified School District v. Honig* (1988) 44 Cal.3d 830 [244 Cal. Rptr. 677, 750 P.2d 318] (*Lucia Mar*). The state law at issue in *Lucia Mar* required local school districts to pay a portion of the cost of educating pupils in *state* schools for the severely handicapped--costs that the state previously had paid in full.

We determined that the contributions called for under the law were used to fund a "program" within both definitions of that term set forth in *County of Los Angeles.* (*Lucia Mar, supra,* 44 Cal.3d 830, 835.) We stated: "[T]he education of handicapped children is clearly a governmental function providing a service to the public, and the [state law] imposes requirements on school districts not imposed on all the state's residents. Nor can there be any doubt that although the schools for the handicapped have been operated by the state for many years, the program was new insofar as plaintiffs are [*876] concerned, since at the time [the state law] became effective they were not required to contribute to the education of students from their districts at such schools. [¶] ... To hold, under the circumstances of this case, that a shift in funding of an existing program from the state to a local entity is not a new program as to the local agency would, we think, violate the intent underlying section 6 of article XIIIB. ... Section 6 was intended to preclude the state from shifting to local agencies the [***476] financial responsibility for providing public services in view of ... restrictions on the taxing and spending power of the local entities." (*Lucia Mar, supra,* 44 Cal.3d 830, 835-836; see also *County of San Diego v. State of California* (1997) 15 Cal.4th 68, 98 [61 Cal. Rptr. 2d [**598] 134, 931 P.2d 312] [legislation excluding indigents from Medi-Cal coverage transferred obligation for such costs from state to counties, and constituted a reimbursable "new program or higher level of service"].)

We again applied the alternative tests set forth in *County of Los Angeles, supra,* 43 Cal.3d 46, in *City of Sacramento v. State of California* (1990) 50 Cal.3d 51 [266 Cal. Rptr. 139, 785 P.2d 522] (*City of Sacramento*). In that case we considered whether a state law implementing federal "incentives" that encouraged states to extend unemployment insurance coverage to all public employees constituted a program or higher level of service under article XIII B, section 6. We concluded that it did not because, as in *County of Los Angeles,* (1) providing unemployment compensation protection to a city's own employees was not a service to the public; and (2) the statute did not apply uniquely to local governments--indeed, the same requirements previously had been applied to most employers, and extension of the requirement (by eliminating a prior exemption for local governments) merely placed local government employers on the same footing as most private employers. (*City of Sacramento, supra,* 50 Cal.3d at pp. 67-68.)

Subsequently, the Court of Appeal in *City of Richmond v. Commission on State Mandates* (1998) 64 Cal.App.4th 1190 [75 Cal. Rptr. 2d 754] (*City of Richmond*), following *County of Los Angeles, supra,* 43 Cal.3d 46, and *City of Sacramento, supra,* 50 Cal.3d 51, concluded that requiring local governments to provide death benefits to local safety officers, under both the Public Employees' Retirement System (PERS) and the workers' compensation system, did not constitute a higher level of service to the public. The Court of Appeal arrived at that determination even though--as might also have been argued in *County of Los Angeles* and *City of Sacramento*--such benefits may "generate a higher quality of local safety officers" and thereby, in a general and indirect sense, provide the public with a "higher level of service" by its employees. (*City of Richmond, supra,* 64 Cal.App.4th 1190, 1195.)

(7) Viewed together, these cases (*County of Los Angeles, supra,* 43 Cal.3d 46, *City of Sacramento, supra,* 50 Cal.3d 51, and *City of Richmond, supra,* 64 Cal.App.4th 1190) illustrate the circumstance that [HN18]simply because a state law or order may *increase the costs* borne by local government *in providing services*, this does not necessarily establish that the law [*877]

or order constitutes an *increased or higher level* of the resulting "service to the public" under article XIII B, section 6, and Government Code section 17514. [12]

> 12 Indeed, as the court in *City of Richmond, supra*, 64 Cal.App.4th 1190, observed: "Increasing the cost of providing services cannot be equated with requiring an increased level of service under [article XIII B,] section 6 ... . A higher cost to the local government for compensating its employees is not the same as a higher cost of providing [an increased level of] services to the public." (*Id.*, at p. 1196; accord, *City of Anaheim v. State of California* (1987) 189 Cal. App. 3d 1478, 1484 [235 Cal. Rptr. 101] [temporary increase in PERS benefit to retired employees, resulting in higher contribution rate by local government, does not constitute a higher level of service to the public].)

[***477] **(8)** By contrast, [HN19]Courts of Appeal have found a reimbursable "higher level of service" concerning an existing "program" when a state law or executive order mandates not merely some change that increases the cost of providing services, but an increase in the actual level or quality of governmental services provided. In *Carmel Valley Fire Protection Dist. v. State of California* (1987) 190 Cal. App. 3d 521, 537-538 [234 Cal. Rptr. 795] (*Carmel Valley*), for example, an executive order required that county firefighters be provided with protective clothing and safety equipment. Because this increased safety equipment apparently was designed to result in more effective fire protection, the mandate evidently was intended to produce a higher level of service to the public, thereby satisfying the first alternative test set out in *County of Los Angeles, supra*, 43 Cal.3d 46, 56. Similarly, in *Long Beach Unified School District v. State of California* (1990) 225 Cal. App. 3d 155, 173 [**599] [275 Cal. Rptr. 449] (*Long Beach*), an executive order required school districts to take specific steps to measure and address racial segregation in local public schools. The appellate court held that this constituted a "higher level of service" to the extent the order's requirements exceeded federal constitutional and case law requirements by mandating school districts to undertake defined remedial actions and measures that were merely advisory under prior governing law.

The District and the Commission assert that the "mandatory" aspect of Education Code section 48915, insofar as it compels suspension and mandates an expulsion recommendation for firearm possession (and thereafter restricts the board's options to expulsion or referral to an off-site alternative school), carries out a governmental function of providing services to the public and hence constitutes an increased or higher level of service concerning an existing program under the first alternative test of *County of Los Angeles, supra*, 43 Cal.3d 46, 56. They argue, in essence, that the present matter is more analogous to the latter cases (*Carmel Valley, supra*, 190 [*878] Cal. App. 3d 521, and *Long Beach, supra*, 225 Cal. App. 3d 155)--both of which involved measures designed to increase the level of governmental service provided to the public--than to the former cases (*County of Los Angeles, supra*, 43 Cal.3d 46, *City of Sacramento, supra*, 50 Cal.3d 51, and *City of Richmond, supra*, 64 Cal.App.4th 1190)--in which the cost of employment was increased but the resulting governmental services themselves were not directly enhanced or increased. As we shall explain, we agree with the District and the Commission.

(9) The statutory requirements here at issue--immediate suspension and mandatory recommendation of expulsion for students who possess a firearm, and the limitation upon the ensuing options of the school board (expulsion or referral)--reasonably are viewed as providing a "higher level of service" to the public under the commonly understood sense of that term: (i) the requirements are new in comparison with the preexisting scheme in view of the circumstance that they did not exist prior to the enactment of Statutes of 1993, chapters 1255 (Assem. Bill No. 342 (1993-1994 Reg. Sess.) (Assembly Bill No. 342)) and 1256 (Senate Bill [***478] No. 1198 (1993-1994 Reg. Sess.) (Senate Bill No. 1198)); and (ii) the requirements were intended to provide an enhanced service to the public--*safer schools for the vast majority of students* (that is, those who are not expelled or referred to other school sites). In other words, the legislation was premised upon the idea that by removing potentially violent students from the general school population, the safety of those students who remain thereby is increased. (See, e.g., Stats. 1993, ch. 1255, § 4, pp. 7285-7286 ["In order to ensure public safety on school campuses ... it is necessary that this act take effect immediately"]; Sen. Com. on Education (Apr. 28, 1993), Analysis of Assem. Bill No. 342, p. 2 [noting legislative purpose to enhance public safety]; see also Assem. Com. on Education (July 14, 1993), Analysis of Sen. Bill No. 1198, p. 1 [noting legislative purpose to remove those who possess firearms from the general school population by increasing the frequency of expulsion for such conduct].)

In challenging this conclusion, the Department relies upon *County of Los Angeles v. Department of Industrial Relations* (1989) 214 Cal. App. 3d 1538 [263 Cal. Rptr. 351] (*Department of Industrial Relations*). In that case, the state enacted enhanced statewide safety regulations that governed all public and private elevators, and thereafter the County of Los Angeles sought reimbursement

for the costs of complying with the new regulations. The Court of Appeal found that the regulations constituted neither a new program nor a higher level of service concerning an existing program under either of the two alternative tests set out in *County of Los Angeles, supra,* 43 Cal.3d 46, 56. The court concluded that the elevator regulations did not meet the first alternative test, because the regulations did not carry out a governmental function of providing services to the public; the court found instead that [*879] "[p]roviding elevators equipped with fire and earthquake [**600] safety features simply is not a 'government function of providing services to the public.' " (*Department of Industrial Relations, supra,* 214 Cal. App. 3d at p. 1546.) Moreover, the court found, the second ("uniqueness") test was not met--the regulation applied to all elevators, not only those owned or operated by local governments.

(10) The Department asserts that *Department of Industrial Relations, supra,* 214 Cal. App. 3d 1538, is analogous, and argues that the "service" afforded by mandatory suspensions followed by a required expulsion recommendation, etc., is "not qualitatively different from the safety regulations at issue in [*Department of Industrial Relations*]. School districts carrying out such expulsions are not providing a service to the public ... ." We disagree. Providing public schooling clearly constitutes a governmental function, and enhancing the safety of those who attend such schools constitutes a service to the public. Moreover, here, unlike the situation in *Department of Industrial Relations,* the law implementing this state policy applies uniquely to local public schools. We conclude that *Department of Industrial Relations* does not conflict with the conclusion that the mandatory suspension and expulsion recommendation requirements, together with restrictions placed upon a district's resolution of such a case, constitute an increased or higher level of service to the public under the constitutional provision and the implementing statutes.

Of course, even if, as we have concluded above, a statute effectuates an increased or higher level of governmental service to the public concerning an existing program, this "does not necessarily lead to the conclusion that the program is a *state* mandate [***479] under California Constitution, article XIIIB, section 6." (*County of Los Angeles v. Commission on State Mandates* (1995) 32 Cal.App.4th 805, 818 [38 Cal. Rptr. 2d 304], italics added (*County of Los Angeles II*).) We turn to the question whether the hearing costs at issue, flowing from compulsory suspensions and mandatory expulsion recommendations, are mandated by the state.

2. *Are the hearing costs state mandated?*

As noted above, a compulsory suspension and a mandatory recommendation of expulsion under Education Code section 48915 in turn trigger a mandatory expulsion hearing. All parties agree that any such resulting expulsion hearing must comply with basic federal due process requirements, such as notice of charges, a right to representation by counsel, an explanation of the evidence supporting the charges, and an opportunity to call and cross-examine witnesses and to present evidence. (See *ante,* fn. 5.) But as also noted above, article XIII B, section 6, and the implementing statutes [*880] (Gov. Code, § 17500 et seq.), by their terms, provide for reimbursement only of *state*-mandated costs, not *federally* mandated costs. The Commission and the Department assert that this circumstance raises the question: Do all or some of a district's costs in complying with the mandatory expulsion provision of Education Code section 48915 constitute a nonreimbursable *federal* mandate?

(11) In the absence of the operation of Education Code section 48915's mandatory provision (specifically, compulsory immediate suspension and a mandatory expulsion recommendation), a school district would not automatically incur the due process hearing costs that are mandated by federal law pursuant to *Goss, supra,* 419 U.S. 565, and related cases, and codified in Education Code section 48918. Instead, a district would incur such hearing costs only if a school principal first were to exercise discretion to recommend expulsion. Accordingly, in its mandatory aspect, Education Code section 48915 appears to constitute a state mandate, in that it establishes conditions under which the state, rather than local officials, has made the decision requiring a school district to incur the costs of an expulsion hearing.

The Department and the Commission agree to a point, but argue that a district's costs incurred in complying with this state mandate are reimbursable only if, and to the extent that, hearing procedures set forth in Education Code section 48918 exceed the requirements of federal due process. In support, they rely upon Government Code section 17556, [**601] which--in setting forth circumstances in which the Commission shall *not* find costs to be mandated by the state--provides that [HN20]"[t]he commission shall not find costs mandated by the state, as defined in Section 17514, in any claim submitted by a local agency or school district, if, after a hearing, the commission finds that: [¶] ... [¶] (c) The statute or executive order implemented a federal law or regulation and resulted in costs mandated by the federal government, unless the statute or executive order mandates costs which exceed the mandate in that federal law or regulation." [13]

13 Government Code section 17556 reads in full: "The commission shall not find costs mandated by the state, as defined in Section 17514, in

any claim submitted by a local agency or school district, if, after a hearing, the commission finds that: [¶] (a) The claim is submitted by a local agency or school district which requested legislative authority for that local agency or school district to implement the program specified in the statute, and that statute imposes costs upon that local agency or school district requesting the legislative authority. A resolution from the governing body or a letter from a delegated representative of the governing body of a local agency or school district which requests authorization for that local agency or school district to implement a given program shall constitute a request within the meaning of this paragraph. [¶] (b) The statute or executive order affirmed for the state that which had been declared existing law or regulation by action of the courts. [¶] (c) The statute or executive order implemented a federal law or regulation and resulted in costs mandated by the federal government, unless the statute or executive order mandates costs which exceed the mandate in that federal law or regulation. [¶] (d) The local agency or school district has the authority to levy service charges, fees, or assessments sufficient to pay for the mandated program or increased level of service. [¶] (e) The statute or executive order provides for offsetting savings to local agencies or school districts which result in no net costs to the local agencies or school districts, or includes additional revenue that was specifically intended to fund the costs of the state mandate in an amount sufficient to fund the cost of the state mandate. [¶] (f) The statute or executive order imposed duties which were expressly included in a ballot measure approved by the voters in a statewide election. [¶] (g) The statute created a new crime or infraction, eliminated a crime or infraction, or changed the penalty for a crime or infraction, but only for that portion of the statute relating directly to the enforcement of the crime or infraction."

[*881] [***480] **(12)** We agree with the District and the Court of Appeal below that, as applied to the present case, it cannot be said that Education Code section 48915's mandatory expulsion provision "*implemented a federal law or regulation.*" (Italics added.) Education Code section 48915, at the time relevant here, did not implement any federal law; as explained below, federal law did not *then* mandate an expulsion recommendation--or expulsion--for firearm possession. [14] Moreover, although the Department argues that in this context Government Code section 17556, subdivision (c)'s phrase "the statute" should be viewed as referring not to Education Code section 48915's mandatory expulsion recommendation requirement, but instead to the mandatory due process hearing under Education Code section 48918 that is triggered by such an expulsion recommendation, it still cannot be said that section 48918 itself required the District to incur any costs. As noted above, Education Code section 48918 sets out requirements for expulsion hearings that must be held when a district seeks to expel a student--but neither section 48918 nor federal law requires that any such expulsion recommendation be made in the first place, and hence section 48918 does not implement any federal mandate that school districts hold such hearings and incur such costs whenever a student is found in possession of a firearm. Accordingly, we conclude that the so-called exception to reimbursement described in Government Code section 17556, subdivision (c), is inapplicable in this context.

14 Subsequent amendments to federal law may alter this conclusion with regard to future test claims concerning Education Code section 48915's mandatory expulsion provision--see *post*, pages 882-883.

(13) Because it is state law (Education Code section 48915's mandatory expulsion provision), and not federal due process law, that requires the District to take steps that in turn require it to incur hearing costs, it follows, contrary to the view of the Commission and the Department, that we cannot characterize *any* of the hearing costs incurred by the District, triggered by the mandatory provision of Education Code section 48915, as constituting a federal mandate (and hence being nonreimbursable). We conclude [**602] that under the statutes existing at the time of the test claim in this case (state legislation in effect through [***481] mid-1994), *all* such hearing costs--those designed to satisfy the minimum requirements of federal due process, and those that may exceed [*882] those requirements--are, with respect to the mandatory expulsion provision of section 48915, state-mandated costs, fully reimbursable by the state. [15]

15 In exhibit No. 1 to its claim, the District presented the declaration of a District official, estimating that in order to process "350 proposed expulsions" during the period spanning July 1, 1993, to June 30, 1994, the District would incur approximately $ 94,200 "in staffing and other costs"--yielding an average estimated cost of approximately $ 270 per hearing during the relevant period. It is unclear from the record how many of these 350 hearings would be triggered by Education Code section 48915's mandatory expulsion provision (and constitute state-mandated costs subject to reimbursement under article XIII B, section 6), and how many of these 350 hearings

would be triggered by Education Code section 48915's discretionary provision (and, as explained *post*, in part II.B., constitute a nonreimbursable *federal* mandate).

We note that in the proceedings below, the Commission did not confine reimbursement only to those matters as to which the District on its own initiative would not have sought expulsion in the absence of the statutory requirement that it seek expulsion--and the Department has not raised that point in the trial court or on appeal.

Against this conclusion, the Department, in its supplemental briefing, offers a wholly new theory, not advanced in any of the proceedings below, in support of its belated claim that *all* hearing costs triggered by Education Code section 48915's mandatory expulsion provision are in fact nonreimbursable *federal* mandates, and not, as we have concluded above, reimbursable state mandates. As we shall explain, we reject the Department's contention, as applied to the test case here at issue (involving state statutes in effect through mid-1994).

The Department cites 20 United States Code section 7151, part of the federal No Child Left Behind Act of 2001, which provides, as relevant here: [HN21]"Each State receiving Federal funds under any [subchapter of this chapter] shall have in effect a State law requiring local educational agencies to expel from school for a period of not less than 1 year a student who is determined to have brought a firearm to a school, or to have possessed a firearm at a school, under the jurisdiction of local educational agencies in that State, except that such State law shall allow the chief administering officer of a local educational agency to modify such expulsion requirement for a student on a case-by-case basis if such modification is in writing." [16]

16 "Firearm," as defined in 18 United States Code section 921, includes guns and explosives.

The Department further asserts that more than $ 2.8 billion in federal funds under the No Child Left Behind Act are included "for local use" in the 2003-2004 state budget. (Cal. State Budget, 2003-2004, Budget Highlights, p. 4.) The Department argues that in light of the requirements set forth in 20 United States Code section 7151, and the amount of federal program funds at issue under the No Child Left Behind Act, the financial consequences to the state and to the school districts of failing to comply with 20 United States Code section 7151 are such that as a practical matter, Education Code section [*883] 48915's mandatory expulsion provision in reality constitutes an implementation of federal law, and hence resulting costs are nonreimbursable except to the extent they exceed the requirements of federal law. (See Gov. Code, § 17556, subd. (c); see also *Kern High School Dist., supra*, 30 Cal.4th 727, 749-751; *City of Sacramento, supra*, 50 Cal.3d 51, 70-76.) Moreover, the Department asserts, to the extent school districts are [***482] compelled by federal law, through Education Code section 48915's mandatory expulsion provision, to hold hearings pursuant to section 48918 in cases of firearm possession on school grounds, under 20 United States Code section 7164 (defining prohibited uses of program funds), *all* costs of such hearings properly may be paid out of federal program funds, and hence we should "view the ... provision of program funding as satisfying, in advance, any reimbursement requirement." (*Kern High School Dist., supra*, 30 Cal.4th 727, 747.)

[**603] Although the Department asserts that this federal law and program existed at the time relevant in this matter (that is, through mid-1994), our review of the statutes and relevant history suggests otherwise. Title 20 of the United States Code, section 7151, and the remainder of the No Child Left Behind Act, became effective on January 8, 2002. The predecessor legislation cited by the Department--the Gun-Free Schools Act of 1994 (former 20 U.S.C. § 8921(a)), although containing a substantially identical mandatory expulsion provision (*id.*, § 8921(b)(1)) [17]--was not effective until July 1, 1995 (108 Stat. 3518, § 3). In turn, the predecessor legislation to *that* act cited by the Department, the Elementary and Secondary Education Act of 1965 (former 20 U.S.C. § 6301 et seq.) as it existed at the time relevant here (July 1, 1993, through June 30, 1994)--contained no such mandatory expulsion provision. Accordingly, it appears that despite the Department's late discovery of 20 United States Code section 7151, at the time relevant here (regarding legislation in effect through mid-1994), neither 20 United States Code section 7151, nor either of its predecessors, compelled states to enact a law such as Education Code section 48915's mandatory expulsion provision. Therefore, we reject the Department's assertion that, during the time period at issue in this case, Education Code section 48915's mandatory expulsion provision constituted an implementation of a federal, rather than a state, mandate.

17 The prior law stated: "Except as provided in paragraph (3), each State receiving Federal funds under this chapter shall have in effect a State law requiring local educational agencies to expel from school for a period of not less than one year a student who is determined to have brought a weapon to a school under the jurisdiction of local educational agencies in that State, except that such State law shall allow the chief administering officer of such local educational agency to modify such expulsion requirement for a student on a case-by-case basis." (Pub.L. No.

103-382, § 14601(b)(1) (Oct. 20, 1994) 108 Stat. 3518.)

(14) Although we conclude that all hearing costs triggered by Education Code section 48915's mandatory expulsion provision constitute reimbursable state-mandated expenses under the statutes as they existed during the period [*884] covered by the District's present test claim, we do not foreclose the possibility that 20 United States Code section 7151 or its predecessor, 20 United States Code section 8921, may lead to a different conclusion when applied to versions of Education Code section 48915 effective in years 1995 and thereafter. Indeed, we note that at least one subsequent test claim that has been filed with the Commission may raise the federal statutory issue advanced by the Department. [18]

18 See Pupil Expulsions II (4th Amendment), CSM No. 01-TC-18 (filed June 3, 2002). This claim, filed by the San Juan Unified School District, asserts reimbursable state mandates with respect to, among numerous other statutes, Education Code section 48915, as amended effective in 2002.

B. *Costs associated with hearings triggered by discretionary expulsion recommendations*

We next consider whether reimbursement is required for the costs associated [***483] with hearings triggered under discretionary expulsion provisions. Again, we address first the issue that we asked the parties to brief: Does the discretionary expulsion provision of Education Code section 48915 (former subd. (c), thereafter subd. (d), currently subd. (e)), which, as noted above, recognized that a principal possesses *discretion* to recommend that a student be expelled for specified conduct other than firearm possession (conduct such as damaging or stealing property, using or selling illicit drugs, possessing tobacco or drug paraphernalia, etc.), and further specified that the school district governing board "may" order a student expelled upon finding that the student, while at school or at a school activity off school grounds, engaged in such conduct, constitute a "new program or higher level of service" under article XIII B, section 6 of the state Constitution, and under Government Code section 17514?

(15) We answer this question in the negative. The discretionary expulsion provision of Education Code section 48915 does not constitute a "new" program or higher level of service, because provisions recognizing discretion to suspend or expel were set forth in statutes predating 1975. (See Educ. Code, former § 10601, Stats. 1959, ch. 2, § 3, p. 860 [**604] [providing that a student may be suspended for good cause]; *id.*, former § 10602, Stats. 1970, ch. 102, § 102, p. 159 [defining "good cause"]; *id.*, former section 10601.6, Stats. 1972, ch. 164, § 2, p. 384 [further defining "good cause"].) [19] Accordingly, the discretionary expulsion provision of Education Code section 48915 is not a "new" program under article XIII B, section 6, and the implementing statutes, [*885] nor does it reflect a higher level of service related to an existing program. (*County of Los Angeles, supra*, 43 Cal.3d 46, 56.)

19 As the Commission observed in its Corrected Statement of Decision in this matter: "The authorization for governing boards to expel pupils from school for inappropriate behaviors has been in existence since before 1975. The behaviors defined as inappropriate under current law, subdivisions (a) though (l) of section 48900, 48900.2, and 48900.3, meet prior laws' definitions of 'good cause' and 'misconduct' as reasons for expulsion." (Italics deleted.)

The District maintains, nevertheless, that once it elects to pursue expulsion, it is obligated to abide by the procedural hearing requirements of Education Code section 48918 and accordingly is mandated by that section to incur costs associated with such compliance. The District asserts that in this respect, *section 48918* constitutes a "new program or higher level of service" related to an existing program under article XIII B, section 6 and under Government Code section 17514. We shall assume for analysis that this is so. [20]

20 The requirements of Education Code section 48918 would appear to be "new" for purposes of the reimbursement provisions, in that they did not exist prior to 1975 and were enacted in that year and subsequently. (See *ante*, fn. 2.) The requirements also would appear to meet both alternative tests set forth in *County of Los Angeles, supra*, 43 Cal.3d 46, 56--that is, by implementing procedures that direct and guide the process of expulsion from public school, the statute appears to carry out a governmental function of providing services to public school students who face expulsion; or, it would seem, section 48918 constitutes a law that, to implement state policy, imposes unique requirements on local governments.

The District recognizes, of course, that under Government Code, section 17556, subdivision (c), it is not entitled to reimbursement to the extent Education Code section 48918 merely implements federal due process law, but the District argues that it has a right to reimbursement for its costs of complying with section 48918 *to* [***484] *the extent* those costs are attributable to hearing procedures that *exceed* federal due process re-

quirements. (See Gov. Code, § 17556, subd. (c).) The District asserts that its costs in complying with various notice, right of inspection, and recording requirements (see *ante*, fn. 11) fall into this category and are reimbursable.

The Department and the Commission argue in response that any right to reimbursement for hearing costs triggered by discretionary expulsions--even costs limited to those procedures that assertedly exceed federal due process hearing requirements--is foreclosed by virtue of the circumstance that when a school pursues a discretionary expulsion, it is not acting under compulsion of any law but instead is exercising a choice. In support, the Department and the Commission rely upon *Kern High School Dist., supra*, 30 Cal.4th 727, and *City of Merced v. State of California* (1984) 153 Cal. App. 3d 777 [200 Cal. Rptr. 642] (*City of Merced*).

In *Kern High School Dist., supra*, 30 Cal.4th 727, school districts asserted that costs incurred in complying with statutory notice and agenda requirements for committee meetings concerning various state and federally funded educational programs constituted a reimbursable state mandate, because once [*886] school districts *elected* to participate in the underlying state and federal programs, the districts had no option but to hold program-related committee meetings and abide by the challenged notice and agenda requirements. (*Id.*, at p. 742.) We rejected the school districts' position, reasoning in part that because the districts' participation in the underlying programs was voluntary, the notice and agenda costs incurred as a result of that voluntary participation were not the product of legal compulsion and did not constitute a reimbursable state mandate on that basis. (*Id.*, [**605] at p. 745.) [21]

> 21 We also proceeded to hold that in any event, because the school districts were free to use program funds to pay for the challenged increased costs, the districts had, in practical effect, already been given funds by the Legislature to cover the challenged costs. (*Kern High School Dist., supra*, 30 Cal.4th at pp. 748-754.)

In reaching that conclusion in *Kern High School Dist., supra*, 30 Cal.4th 727, we discussed *City of Merced, supra*, 153 Cal. App. 3d 777. In that case, the city wished either to purchase or to condemn, pursuant to its eminent domain authority, certain privately owned real property. The city elected to proceed by eminent domain, under which it was required by then recent legislation (Code Civ. Proc., § 1263.510) to compensate the property owner for loss of "business goodwill." The city so compensated the property owner and then sought reimbursement from the state, arguing that the new statutory requirement that it compensate for business goodwill amounted to a reimbursable state mandate. (*City of Merced, supra*, 153 Cal. App. 3d at p. 780.) The Court of Appeal concluded that the city's increased costs flowing from its election to condemn the property did not constitute a reimbursable state mandate. (*Id.*, at pp. 781-783.) The court reasoned: "[W]hether a city or county decides to exercise eminent domain is, essentially, an option of the city or county, rather than a mandate of the state. *The fundamental concept is that the city or county is not required to exercise eminent domain. If, however, the power of eminent domain is* [***485] *exercised, then the city will be required to pay for loss of goodwill. Thus, payment for loss of goodwill is not a state-mandated cost.*" (*Id.*, at p. 783, italics added.)

Summarizing this aspect of *City of Merced, supra*, 153 Cal. App. 3d 777, in *Kern High School Dist., supra*, 30 Cal.4th 727, we stated: "[T]he core point articulated by the court in *City of Merced* is that *activities undertaken at the option or discretion of a local government entity* (that is, actions undertaken without any legal compulsion or threat of penalty for nonparticipation) *do not trigger a state mandate and hence do not require reimbursement of funds--even if the local entity is obliged to incur costs as a result of its discretionary decision to participate in a particular program or practice.*" (*Kern High School Dist.*, at p. 742, italics added.)

The Department and the Commission argue that in the present case the District, like the claimants in *Kern High School Dist.*, errs by focusing upon [*887] the final result--a school district's legal obligation to comply with statutory hearing procedures--rather than focusing upon whether the school district has been *compelled* to put itself in the position in which such a hearing (with resulting costs) is required.

The District and amici curiae on its behalf (consistently with the opinion of the Court of Appeal below) argue that the holding of *City of Merced, supra*, 153 Cal. App. 3d 777, should not be extended to apply to situations beyond the context presented in that case and in *Kern High School Dist., supra*, 30 Cal.4th 727. The District and amici curiae note that although any particular expulsion recommendation may be discretionary, as a practical matter it is inevitable that some school expulsions will occur in the administration of any public school program. [22]

> 22 Indeed, the Court of Appeal below suggested that the present case is distinguishable from *City of Merced, supra*, 153 Cal. App. 3d 777, in light of article I, section 28, subdivision (c), of the state Constitution. That constitutional subdivision, part of Proposition 8 (known as the Victims' Bill of Rights initiative, adopted by the voters at the Primary Election in June 1982),

states: "All students and staff of public primary, elementary, junior high and senior high schools have the inalienable right to attend campuses which are safe, secure and peaceful." The Court of Appeal below concluded: "In light of a school district's constitutional obligation to provide a safe educational environment ... , the incurring of [hearing] costs [under Education Code section 48918] cannot properly be viewed as a nonreimbursable 'downstream' consequence of a decision to [seek to] expel a student under [Education Code section 48915's discretionary provision] for damaging or stealing school or private property, using or selling illicit drugs, receiving stolen property, engaging in sexual harassment or hate violence, or committing other specified acts of misconduct ... that warrant such expulsion."

Building upon this theme, amicus curiae on behalf of the District, California School Boards Association, argues that based upon article I, section 28, subdivision (c), of the state Constitution, together with Education Code section 48200 et seq. and article IX, section 5 of the state Constitution (establishing and implementing a right of public education), *no* expulsion recommendation is "truly discretionary." Indeed, amicus curiae argues, school districts may not, "either as a matter of law or policy, realistically choose to [forgo] expelling [a] student [who commits one of the acts, other than firearm possession, referenced in Education Code section 48915's discretionary provision], because doing so would fail to meet that school district's legal obligations to provide a safe, secure and peaceful learning environment for the other students."

[**606] Upon reflection, we agree with the District and amici curiae that there is reason to question an extension of the holding of *City of Merced* so as to preclude reimbursement [***486] under article XIII B, section 6 of the state Constitution and Government Code section 17514, whenever an entity makes an initial discretionary decision that in turn triggers mandated costs. Indeed, it would appear that under a strict application of the language in *City of Merced*, public entities would be denied reimbursement for state-mandated costs in apparent contravention of the intent underlying article XIII B, section [*888] 6 of the state Constitution and Government Code section 17514 [23] and contrary to past decisions in which it has been established that reimbursement was in fact proper. For example, as explained above, in *Carmel Valley, supra*, 190 Cal. App. 3d 521, an executive order requiring that county firefighters be provided with protective clothing and safety equipment was found to create a reimbursable state mandate for the added costs of such clothing and equipment. (*Id.*, at pp. 537-538.) The court in *Carmel Valley* apparently did not contemplate that reimbursement would be foreclosed in that setting merely because a local agency possessed discretion concerning how many firefighters it would employ--and hence, in that sense, could control or perhaps even avoid the extra costs to which it would be subjected. Yet, under a strict application of the rule gleaned from *City of Merced, supra*, 153 Cal. App. 3d 777, such costs would not be reimbursable for the simple reason that the local agency's decision to employ firefighters involves an exercise of discretion concerning, for example, how many firefighters are needed to be employed, etc. We find it doubtful that the voters who enacted article XIII B, section 6, or the Legislature that adopted Government Code section 17514, intended that result, and hence we are reluctant to endorse, in this case, an application of the rule of *City of Merced* that might lead to such a result.

23 As we observed in *Kern High School Dist., supra*, 30 Cal.4th 727, 751-752, "article XIII B, section 6's 'purpose is to preclude the state from shifting financial responsibility for carrying out governmental functions to local agencies, which are "ill equipped" to assume increased financial responsibilities.' "

(16) In any event, we have determined that we need not address in this case the problems posed by such an application of the rule articulated in *City of Merced,* because this aspect of the present case can be resolved on an alternative basis. As we shall explain, we conclude, regarding the reimbursement claim that we face presently, that *all* hearing procedures set forth in Education Code section 48918 properly should be considered to have been adopted to implement a federal due process mandate, and hence that all such hearing costs are nonreimbursable under article XIII B, section 6, and Government Code section 17557, subdivision (c).

In this regard, we find the decision in *County of Los Angeles II, supra*, 32 Cal.App.4th 805, to be instructive. That case concerned Penal Code section 987.9, which requires counties to provide indigent criminal defendants with defense funds for ancillary investigation services related to capital trials and certain other trials, and further provides related procedural protections--namely, the confidentiality of a request for funds, the right to have the request ruled upon by a judge other than the trial judge, and the right to an in camera hearing on the request. The county in that case asserted that funds expended under the statute constituted reimbursable [**607] state mandates. The Court of Appeal disagreed, finding instead that the Penal Code section merely implements the requirements of federal constitu-

tional law, and that "even in the [*889] absence of [Penal Code] section 987.9, ... [***487] counties would be responsible for providing ancillary services under the constitutional guarantees of due process ... and [under] the Sixth Amendment ... ." (32 Cal.App.4th at p. 815.) Moreover, the Court of Appeal concluded, the procedural protections that the Legislature had built into the statute--requirements of confidentiality of a request for funds, the right to have the request ruled upon by a judge other than the trial judge, and the right to an in camera hearing on the request--were merely incidental to the federal rights codified by the statute, and their "financial impact" was de minimis. (*Id.*, at p. 817, fn. 7.) Accordingly, the Court of Appeal concluded, the Penal Code section, in its entirety--that is, *even those incidental aspects of the statute that articulated specific procedures, not expressly set forth in federal law, for the filing and resolution of requests for funds*--constituted an implementation of federal law, and hence those costs were nonreimbursable under article XIII B, section 6.

(17) We conclude that the same reasoning applies in the present setting, concerning the District's request for reimbursement for procedural hearing costs triggered by its discretionary decision to seek expulsion. As in *County of Los Angeles II, supra,* 32 Cal.App.4th 805, the initial discretionary decision (in the former case, to file charges and prosecute a crime; in the present case, to seek expulsion) in turn triggers a federal constitutional mandate (in the former case, to provide ancillary defense services; in the present case, to provide an expulsion hearing). In both circumstances, the Legislature, in adopting specific statutory procedures to comply with the general federal mandate, reasonably articulated various incidental procedural protections. These protections are designed to make the underlying federal right enforceable and to set forth procedural details that were not expressly articulated in the case law establishing the respective rights; viewed singly or cumulatively, they did not significantly increase the cost of compliance with the federal mandate. The Court of Appeal in *County of Los Angeles II* concluded that, for purposes of ruling upon a claim for reimbursement, such incidental procedural requirements, producing at most de minimis added cost, should be viewed as part and parcel of the underlying federal mandate, and hence nonreimbursable under Government Code, section 17556, subdivision (c). We reach the same conclusion here.

Indeed, to proceed otherwise in the context of a reimbursement claim would produce impractical and detrimental consequences. The present case demonstrates the point. The record reveals that in the extended proceedings before the Commission, the parties spent numerous hours producing voluminous pages of analysis directed toward determining whether various provisions of Education Code section 48918 exceeded federal due process requirements. That task below was complicated by the circumstance that this area of federal due process law is not well developed. The Commission, which is not a judicial body, did as best it could and concluded that in certain [*890] respects the various provisions (as observed *ante*, footnote 11, predominantly concerning notice, right of inspection, and recording requirements) "exceeded" the requirements of federal due process.

Even for an appellate court, it would be difficult and problematic in this setting to categorize the various notice, right of inspection, and recording requirements here at issue as falling either within or without the general federal due process mandate. The difficulty results not only from the circumstance that, as noted, the case law [***488] in the area of due process procedures concerning expulsion matters is relatively undeveloped, but also from the circumstance that when such an issue is raised in an action for reimbursement, as opposed to its being raised in litigation challenging an actual expulsion on the ground of allegedly inadequate hearing procedures, the issue inevitably is presented in the abstract, without any factual context that might help frame the legal issue. In such circumstances, courts are--and should be-- [**608] wary of venturing pronouncements (especially concerning matters of constitutional law).

In light of these considerations, we agree with the conclusion reached by the Court of Appeal in *County of Los Angeles II, supra,* 32 Cal.App.4th 805: [HN22]for purposes of ruling upon a request for reimbursement, challenged state rules or procedures that are intended to implement an applicable federal law--and whose costs are, in context, de minimis--should be treated as part and parcel of the underlying federal mandate.

(18) Applying that approach to the case now before us, we conclude there can be no doubt that the assertedly "excessive due process" aspects of Education Code section 48918 for which the District seeks reimbursement in connection with hearings triggered by discretionary expulsions (see *ante*, footnote 11--primarily, as noted, various notice, right of inspection, and recording rules) fall within the category of matters that are merely incidental to the underlying federal mandate, and that produce at most a de minimis cost. Accordingly, for purposes of the District's reimbursement claim, [HN23]all hearing costs incurred under Education Code section 48918, triggered by the District's exercise of discretion to seek expulsion, should be treated as having been incurred pursuant to a mandate of federal law, and hence all such costs are nonreimbursable under Government Code section 17556, subdivision (c). [24]

24 We do not foreclose the possibility that a local government might, under appropriate facts,

demonstrate that a state law, though codifying federal requirements in part, also imposes more than "incidental" or "de minimis" expenses in excess of those demanded by federal law, and thus gives rise to a reimbursable state mandate to that extent.

[*891] III

The judgment of the Court of Appeal is affirmed insofar as it provides for full reimbursement of all costs related to hearings triggered by the mandatory expulsion provision of Education Code section 48915. The judgment of the Court of Appeal is reversed insofar as it provides for reimbursement of any costs related to hearings triggered by the discretionary provision of section 48915. All parties shall bear their own costs on appeal.

Kennard, J., Baxter, J., Werdegar, J., Chin, J., Brown, J., and Moreno, J., concurred.

TAB "20"

1 of 1 DOCUMENT

TUALATIN RIVERKEEPERS, an Oregon non-profit corporation; WILLAMETTE RIVERKEEPER, an Oregon non-profit corporation; COLUMBIA RIVERKEEPER, an Oregon non-profit corporation; and LIZ CALLISON, Petitioners-Appellants, v. OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY, an Agency of the State of Oregon; and OREGON ENVIRONMENTAL QUALITY COMMISSION, a Commission of the State of Oregon, Respondents-Respondents, and CLEAN WATER SERVICES, CITY OF PORTLAND, PORT OF PORTLAND, COUNTY OF MULTNOMAH, COUNTY OF CLACKAMAS, CLACKAMAS COUNTY SERVICE DISTRICT NUMBER ONE, SURFACE WATER MANAGEMENT AGENCY OF CLACKAMAS COUNTY, CITY OF GLADSTONE, CITY OF HAPPY VALLEY, CITY OF LAKE OSWEGO, CITY OF MILWAUKIE, CITY OF OREGON CITY, CITY OF RIVER GROVE, CITY OF WEST LINN, CITY OF WILSONVILLE, OAK LODGE SANITARY DISTRICT, CITY OF GRESHAM, and CITY OF FAIRVIEW, Intervenors-Respondents.

A136050

COURT OF APPEALS OF OREGON

235 Ore. App. 132*; *2010 Ore. App. LEXIS 465

May 11, 2009, Argued and Submitted
April 28, 2010, Filed

PRIOR HISTORY: [**1]
Multnomah County Circuit Court 060100752. Christopher J. Marshall, Judge.

DISPOSITION: Affirmed.

COUNSEL: Christopher Winter argued the cause for appellants. With him on the joint briefs were Crag Law Center and Brent Foster.

Erin C. Lagesen, Assistant Attorney General, argued the cause for respondents. With her on the brief were Hardy Myers, Attorney General, and Mary H. Williams, Solicitor General.

Jay T. Waldron argued the cause for intervenors-respondents. With him on the joint brief were Laura Maffei, Andrew J. Lee and Schwabe, Williamson & Wyatt, P.C.; G. Kevin Kiely, James Kincaid, Carla Scott, and Cable Huston Benedict Haagensen & Lloyd LLP; David Doughman and Beery Elsner & Hammond LLP; and David Ris and Gresham City Attorney's Office.

James J. Nicita filed the brief *amicus curiae* for Northwest Environmental Defense Center, Northwest Environmental Advocates, Native Fish Society, Friends of the Clackamas River, and Barbara Kemper.

JUDGES: Before Wollheim, Presiding Judge, and Brewer, Chief Judge, and Sercombe, Judge. *

* Brewer, C. J., *vice* Edmonds, P. J.

OPINION BY: SERCOMBE

OPINION

[*135] SERCOMBE, J.

Petitioners sought judicial review of several municipal storm water permits issued by respondent [1] pursuant to *ORS 468B.050* and the federal [**2] Clean Water Act, *see 33 USC § 1342*. [2] They appeal following the trial court's grant of summary judgment in favor of respondent, contending that, in issuing the permits, respondent acted inconsistently with the requirements of *ORS*

468B.025(1)(b) and *OAR 340-045-0015(5)(c)*, as well as *ORS 468B.050* and *OAR 340-042-0080*. We affirm.

1 For ease of reference, we refer to Oregon Department of Environmental Quality (DEQ) and Oregon Environmental Quality Commission (EQC), collectively, as "respondent."

2 The Federal Water Pollution Control Act, *33 USC §§ 1251 - 1376*, is generally referred to as the Clean Water Act. National Pollutant Discharge Elimination System permits are issued pursuant to the Clean Water Act. They are specifically provided for in *33 USC section 1342*.

The storm water permits at issue are all National Pollutant Discharge Elimination System (NPDES) permits, issued by respondent as part of the state's implementation of the Clean Water Act. *See ORS 468B.035* (EQC "may perform or cause to be performed any acts necessary to be performed by the state to implement" the provisions of the Clean Water Act). Although municipal storm water was not initially regulated pursuant to the NPDES program, [**3] [3] eventually, the Clean Water Act was amended to explicitly require regulation of certain storm water discharges. *See American Min. Congress v. U.S.E.P.A., 965 F2d 759, 763 (9th Cir 1992)* (discussing amendments to Clean Water Act requiring that regulation). After those amendments but prior to 1994, most discharges composed entirely of storm water did not require an NPDES permit. *33 USC § 1342(p)(1)*. However, discharges from municipal separate storm sewer systems [4] serving populations of more than 100,000 people were subject to a permit [*136] requirement. *33 USC § 1342(p)(2)(C) - (D)*. The permit requirement now applies to an even larger range of municipal storm water dischargers: OAR 340-045-015(2) provides that, "[w]ithout first obtaining an NPDES permit, a person may not discharge into navigable waters * * * storm water subject to permit requirements in *40 CFR § 122.26* or *§ 122.33*, including storm water from large, medium, and regulated small municipal separate storm sewer systems[.]"

3 For example, 40 CFR section 125.4(f) (1975) provided that, generally, no NPDES permit was required for "uncontrolled discharges composed entirely of storm runoff when these discharges are uncontaminated by [**4] any industrial or commercial activity[.]"

4 A municipal separate storm sewer is

> "a conveyance or system of conveyances including roads with drainage systems, municipal streets, catch basins, curbs, gutter[s], ditches, manmade channels, or storm drains that is owned or operated by a state, city, county, district, association, or other public body; is designed or used for collecting or conveying storm water; and is not a combined sewer or part of a Publicly Owned Treatment Works as defined in *40 CFR § 122.2*."

OAR 340-045-0010(10); *see also OAR 340-045-0010(11)* ("'Municipal Separate Storm Sewer System or MS4' means all municipal separate storm sewers that are defined as 'large,' 'medium,' or 'small' municipal separate storm sewers systems in *40 CFR § 122.26(b)*.").

The NPDES permits at issue in this case were issued by respondent and authorize the municipal permittees, who are intervenors in this judicial review proceeding, to

> "implement a storm water management program to reduce the contribution of pollutants in storm water to the maximum extent practicable (MEP), to address where applicable TMDL [total maximum daily load] wasteload allocations, and to discharge storm water to waters of the [**5] State, in conformance with all the requirements and conditions set forth in the attached schedules * * *." [5]

5 The permit issued to Clean Water Services contains slightly different language.

The permits mandate that the permittees "implement all applicable provisions in the Storm Water Management Plan (SWMP) as the associated Monitoring Program" and incorporate the SWMP by reference.

> "The SWMP and associated Monitoring Program include best management practices (BMPs), monitoring triggers, narrative conditions, adaptive management and other elements designed to reduce the introduction of pollutions into the waters of the State from [municipal separate storm sewer systems] to the maximum extent practicable (MEP). The SWMP also includes evaluation and reporting requirements designed to measure

the effectiveness of BMPs and other programs."

[*137] Pursuant to those permits, the municipal permittees discharge storm water into a number of rivers and streams, including the Columbia, Willamette, and Tualatin Rivers.

Although the permits are extensive, it is undisputed that that they do not contain conditions stating that the storm water discharges must comply with state water quality standards. In addition, [**6] the permits do not specify wasteload allocations [6] in the form of numeric effluent limits; they instead incorporate benchmarks. They also require compliance with the SWMP, which, in turn, incorporates best management practices. It is the permits' lack of numeric limits and conditions requiring compliance with state water quality standards that gave rise to this case.

6 "Wasteload Allocation" refers to the portion of receiving water's loading capacity that is allocated to a particular source of pollution. *See OAR 340-042-0040(4)(g)* (a wasteload allocation "determines the portions of the receiving water's loading capacity that are allocated to existing point sources of pollution, including all point source discharges regulated under the Federal Water Pollution Control Act *Section 402 (33 USC Section 1342)*" (emphasis omitted)); *OAR 340-041-0002(67)* (defining wasteload allocation).

On summary judgment, the trial court concluded that "the agency did not erroneously interpret a provision of law in issuing the final orders before the Court, that the agency's exercise of discretion was not inconsistent with an agency rule, and the agency's discretion was not outside the range of discretion delegated [**7] to the agency by law[.]" Accordingly, it entered a general judgment affirming the permits and dismissing the judicial review proceeding with prejudice. Petitioners seek review of that dismissal.

ORS 183.484(5) provides the criteria for judicial review of orders in other than contested cases: [7]

"(a) The court may affirm, reverse or remand the order. If the court finds that the agency has erroneously interpreted a provision of law and that a correct interpretation compels a particular action, it shall:

"(A) Set aside or modify the order; or

"(B) Remand the case to the agency for further action under a correct interpretation of the provision of law.

[*138] "(b) The court shall remand the order to the agency if it finds the agency's exercise of discretion to be:

"(A) Outside the range of discretion delegated to the agency by law;

"(B) Inconsistent with an agency rule, an officially stated agency position, or a prior agency practice, if the inconsistency is not explained by the agency; or

"(C) Otherwise in violation of a constitutional or statutory provision.

"(c) The court shall set aside or remand the order if it finds that the order is not supported by substantial evidence in the record. Substantial [**8] evidence exists to support a finding of fact when the record, viewed as a whole, would permit a reasonable person to make that finding."

7 The storm water permits at issue are orders in other than a contested case. *See Wilbur Residents v. DEQ, 176 Ore. App. 353, 354, 30 P3d 1228, rev den, 333 Ore. 73, 36 P.3d 974 (2001).*

We review the trial court's judgment to determine whether it correctly assessed respondent's actions under the standards set forth in *ORS 183.484(5). See G.A.S.P. v. Environmental Quality Commission, 198 Ore. App. 182, 187, 108 P.3d 95, rev den, 339 Ore. 230, 119 P.3d 790 (2005)* (we review to determine compliance with the standards set forth in *ORS 183.484(5)*). The issues presented in this case are purely legal in nature. Thus, we review to determine whether, in issuing the permits, respondent "erroneously interpreted a provision of law" and whether respondent exercised its discretion "outside the range of discretion delegated" by law, or acted "inconsistent[ly] with an agency rule" or "otherwise in violation of * * * a statutory provision." *ORS 183.484(5)*. Specifically, we examine the requirements of the statutory and regulatory provisions that petitioners contend respondent violated in issuing [**9] the permits.

In their first assignment of error, petitioners assert that, because the permits "do not ensure that the [allowed] discharges will comply with and protect Water Quality Standards," respondent's issuance of those permits violated the requirements of *ORS 468B.025(1)(b)*

and *OAR 340-045-0015(5)(c)*. [8] In essence, petitioners contend that, in light of [*139] *ORS 468B.025*, respondent was required to impose stricter permit requirements on municipal storm water discharges than are required pursuant to the federal scheme. We look first at the statute, which we construe by examining its text, context, and any legislative history submitted by the parties, giving the legislative history the weight, if any, that we conclude it merits. *State v. Gaines, 346 Ore. 160, 171-72, 206 P3d 1042 (2009)*.

8 Petitioners do not contend that the municipal storm water permits violate the requirements of federal law. In *Defenders of Wildlife v. Browner, 191 F3d 1159, 1163 (9th Cir 1999)*, the court explained the background of the regulation of municipal storm water and explained the requirements of federal law with respect to such storm water and state water quality standards. The court held that permits providing [**10] for discharges of municipal storm water need not require strict compliance with state water quality standards under the federal law. Although the Environmental Protection Agency (EPA) has discretion to require such compliance as it determines appropriate, the federal statutory scheme requires only that municipal storm water dischargers "'reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and systems, design and engineering methods, and other such provisions as the Administrator * * * determines appropriate for the control of such pollutants.'" *Id. at 1165* (quoting *33 USC § 1342(p)(3)(B)(iii)* (omission in original)).

ORS 468B.025 provides:

> "(1) Except as provided in *ORS 468B.050* or *468B.053*, no person shall:
>
> "(a) Cause pollution of any waters of the state or place or cause to be placed any wastes in a location where such wastes are likely to escape or be carried into the waters of the state by any means.
>
> "(b) Discharge any wastes into the waters of the state if the discharge reduces the quality of such waters below the water quality standards established by rule for such waters by the Environmental Quality Commission.
>
> "(2) [**11] No person shall violate the conditions of any waste discharge permit issued under *ORS 468B.050*.
>
> "(3) Violation of subsection (1) or (2) of this section is a public nuisance."

ORS 468B.050, in turn, authorizes DEQ to issue permits and sets out circumstances in which a permit is required. *See also EQC v. City of Coos Bay, 171 Ore. App. 106, 110, 14 P3d 649 (2000)* ("*ORS 468B.050(1)(a)* specifies when it is necessary to obtain a permit[.]").

On its face, *ORS 468B.025* does not set forth standards for the issuance of permits or describe what conditions a permit must contain. Instead, it lists several activities that [*140] "no person shall" engage in. Those are (1) violating the conditions of a permit issued pursuant to *ORS 468B.050*; (2) except as provided in *ORS 468B.050* or *ORS 468B.053*, causing pollution of the waters of the state, or causing waste to be placed in a location where it is likely to enter the waters of the state; and (3) except as provided in *ORS 468B.050* or *ORS 468B.053*, discharging waste into the waters of the state if the discharge reduces the quality of those waters below state water quality standards. None of those provisions directly governs DEQ's issuance of permits.

Furthermore, [**12] pursuant to the plain text of the statute at issue, in context, the prohibition on discharges that reduce the receiving water below state water quality standards is not absolute. On the contrary, as noted, *ORS 468B.025(1)(b)* specifically refers to the permit section of the statute, providing that, "[*e*]*xcept as provided in ORS 468B.050 or 468B.053*," persons may not discharge waste into the water if those discharges reduce the water quality below applicable state water quality standards. (Emphasis added.) Under *ORS 468B.050*, DEQ is authorized to issue a permit allowing the discharge of wastes into the waters of the state. Alternatively, under *ORS 468B.053*, EQC may exempt *de minimis* discharges (and other specified discharges not relevant here) from the permits "required under *ORS 468B.025* or *468B.050*[.]" [9] Read together, the statutes prohibit any person from discharging wastes into the waters of the state if those discharges would reduce the quality of that water below the state's water quality standards *unless* the person has a permit from DEQ specifically authorizing the discharge at issue. Neither statute requires that permits issued must contain provisions mandating compliance with [**13] water quality standards. [10] Instead of placing that type of limitation on respondent's ability to determine and impose [*141] appropriate permit conditions, the statutes generally give respondent discretion in those areas. Indeed, the only express requirement included in *ORS 468B.050* as to the issuance of permits thereunder is that such permits "shall specify applicable effluent limitations."

9 Specifically, pursuant to *ORS 468B.053(2)*, EQC may exempt "from permit requirements subsurface injection of fluids that are authorized under the underground injection control program of" DEQ. Also, *ORS 468B.050* references *ORS 468B.215*, pursuant to which, "[e]xcept for an animal feeding operation subject to regulation under *33 USC 1342*, a fee shall not be assessed to nor permit required under *ORS 468B.050(1)(d)* of confined animal feeding operations of four months or less duration or that do not have waste water control facilities."

10 Federal law generally requires that discharges pursuant to NPDES permits must strictly comply with state water quality standards. *33 USC § 1311(b)(1)(C)*; *see Defenders of Wildlife, 191 F3d at 1163*. However, under *33 USC section 1342(p)(3)(B)*, dischargers of municipal storm [**14] water are not subject to that requirement. *See Defenders of Wildlife, 191 F3d at 1165-66*. Instead, federal law requires that NPDES permits relating to municipal storm water discharges require reduction of "the discharge of pollutants to the maximum extent practicable." *33 USC § 1342(p)(3)(B)(iii)*; *see Defenders of Wildlife, 191 F3d at 1165* ("*§ 1342(p)(3)(B)(iii)* creates a lesser standard than *§ 1311*").

Petitioners, citing *ORS 468B.030*, suggest that an effluent limitation, by definition, must mandate compliance with state water quality standards. That is not the case. *ORS 468B.030* provides, in relevant part:

> "In relation to waters of the state, the [EQC] by rule may establish effluent limitations, as defined in [the Clean Water Act], and other minimum requirements for disposal of wastes, minimum requirements for operation and maintenance of disposal systems, and all other matters pertaining to standards of quality for the waters of the state."

The Clean Water Act, in turn, defines "effluent limitation" as "*any* restriction established by a State or the Administrator on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from [**15] point sources into navigable waters, the waters of the contiguous zone, or the ocean, including schedules of compliance." *33 USC § 1362(11)* (emphasis added). [11] Thus, although a permit must include restrictions on discharges of pollutants into the water, the applicable statute does not specify what form they must take. "Best management practices," such as those incorporated in the permits at issue in this case, are a type of effluent limitation. *See 40 CFR § 122.44(k)(2) - (3)* (best management practices are to be used in NPDES permits where authorized pursuant to *33 USC § 1342(p)* for the control of storm water discharges or where numeric effluent limits are infeasible); *see also Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water* [*142] *Permits, 61 Fed Reg 43,761-01 (Aug 26, 1996)* (EPA considers the use of best management practices appropriate in permitting of municipal storm water based on typical lack of information on which to base numeric water quality-based effluent limitations). In short, petitioners incorrectly equate effluent limitations with state water quality standards. A statutory requirement that storm water permits include effluent limitations [**16] is not the same as a requirement that the permits mandate compliance with state water quality standards.

11 Effluent limitations can be water-quality based, *see, e.g., OAR 340-041-0002(67)* (a WLA is a water-quality-based effluent limitation) or technology based, *see, e.g., 40 CFR § 125.3* (discussing technology-based effluent limitations).

Petitioners urge that the context of the statute supports their assertion that *ORS 468B.025(1)(b)* should be read to require the inclusion of specific terms mandating compliance with state water quality standards in any permit issued by respondent. [12] We disagree. In fact, our review of the statutory context confirms our determination that, rather than imposing that specific limitation on respondent's authority to issue the type of permits at issue, the legislature delegated broad discretion to the agency. *ORS 468B.015* sets forth the policies of the state to (1) conserve the waters of the state, (2) protect and improve water quality, (3) provide for treatment or other corrective action before waste is discharged into the water, (4) prevent and control pollution, and (5) cooperate with other agencies, states, and the federal government. [13] In order to [**17] carry out that policy, the legislature granted broad authority to respondent:

> "(2) In order to carry out the public policy set forth in *ORS 468B.015*, [DEQ] shall take such action as is necessary for the prevention of new pollution and the abatement of existing pollution by:
>
> [*143] "(a) Fostering and encouraging the cooperation of the people, industry, cities and counties, in order to prevent, control and reduce pollution of waters of the state; and
>
> "(b) Requiring the use of *all available and reasonable methods necessary* to

> achieve the purposes of *ORS 468B.015* and to conform to the standards of water quality and purity established under *ORS 468B.048*."

ORS 468B.020 (emphasis added); *see also Springfield Education Asso. v. Springfield School Dist., 290 Ore. 217, 228, 621 P.2d 547 (1980)* (Terms such as "unreasonable" or "public convenience and necessity" are delegative in nature and give an agency "authority, responsibility and discretion for refining and executing generally expressed legislative policy."); *ORS 468B.048* (authorizing the agency to "establish standards of quality and purity for waters of this state"); *ORS 468.065(1)* (providing that all permits shall be "in a form prescribed by" the agency and shall [**18] "specify its duration, and the conditions for compliance with the rules and standards, if any, adopted by the [EQC] pursuant to * * * ORS chapters 468 * * * and 468B"). Those statutes, taken together, make clear that, instead of including many specific requirements regarding the issuance of permits, the legislature intended to delegate the responsibility for appropriately implementing its policies to the agency. That context, in turn, supports our conclusion that the plain text of *ORS 468B.025(1)(b)* does not require respondent to include in its storm water permits specific conditions mandating compliance with state water quality standards. [14] In light of the foregoing, we conclude that respondent's issuance of the permits in this case did not violate *ORS 468B.025(1)(b)*. [15]

> 12 Petitioners also point to our decision in *EQC v. City of Coos Bay, 171 Ore. App. 106, 14 P3d 649 (2000)*, in support of their first assignment of error. However, that case does not inform our decision here. There, we considered whether *ORS 468B.025* and *ORS 468B.050* authorized EQC to impose penalties on a permittee that violated the terms of its permit and concluded that only *ORS 468B.025* prohibited violations of [**19] permit conditions. We did not address the question whether *ORS 468B.025* required particular conditions mandating compliance with water quality standards to be included in NPDES permits issued by DEQ.
>
> 13 *ORS 468B.015* was amended in 2009. Or Laws 2009, ch 248, § 1. That amendment does not significantly modify the statute's language and, in any event, is not relevant to this case.
>
> 14 We note that we have considered the legislative history submitted by petitioners but did not find it helpful in resolving the issue presented.
>
> 15 We further note, parenthetically, that petitioners' argument, if extended to *ORS 468B.025(1)(a)*, would lead to an absurd result. That section of the statute prohibits any person from, among other things, causing "pollution of any waters of the state" except as provided by *ORS 468B.050* or *ORS 468B.053*. As noted, *ORS 468B.050*, in turn, provides for the issuance of permits. Under petitioners' reasoning, however, the issuance of permits that would allow for pollution of waters of the state would be impermissible. As a result, NPDES permits, which allow for pollution by their terms, could never be issued.

Petitioners next assert that the permits are inconsistent with the requirements [**20] of *OAR 340-045-0015(5)(c)*. [*144] According to petitioners, that rule creates "a distinct and specific regulatory requirement that permits for municipal stormwater discharges comply with Water Quality Standards." We are not persuaded.

"Administrative rules are interpreted under the same analytical framework we apply when construing statutes." *Birmingham v. Department of Forestry, 209 Ore. App. 736, 743-44, 149 P3d 600 (2006), rev den, 342 Ore. 644, 158 P.3d 507 (2007)*. We defer to an agency's interpretation of its own rule if that interpretation is plausible and not inconsistent with the text of the rule, its context, or some other source of law. *Don't Waste Or. Comm. v. Energy Facility Siting Council, 320 Ore. 132, 142, 881 P.2d 119 (1994)*.

Pursuant to *OAR 340-045-0015(5)*:

> "Each person required by sections (1) and (2) of this rule to obtain a permit must:
>
> "(a) Promptly apply to the Department for the permit;
>
> "(b) Fulfill all terms and conditions of the permit issued;
>
> "(c) Comply with applicable federal and state requirements, effluent standards, and limitations including but not limited to those contained in or promulgated pursuant to Sections 204, 301, 302, 304, 306, 307, 402, and 403 of the [Clean Water Act] and [**21] applicable federal and state water quality standards[.]"

The permittees in this case are required to obtain permits pursuant to *OAR 340-045-0015(2)*, which provides:

> "Without first obtaining an NPDES permit, a person may not discharge into navigable waters pollutants from a point

> source or storm water subject to permit requirements in *40 CFR § 122.26* or *§ 122.33*, including storm water from large, medium, and regulated small municipal separate storm sewer systems and storm water associated with industrial or construction activity."

Like *ORS 468B.025*, the text of *OAR 340-045-0015(5)*, does not, by its terms, regulate the issuance of permits by the agency. Instead, it requires persons who must obtain permits pursuant to sections (1) and (2) of the rule to do certain things. Namely, those persons must apply for the [*145] required permit promptly, fulfill the terms and conditions of the permit, and comply with applicable federal and state requirements and standards. On its face, the rule says nothing about what must be included in a permit, nor does it impose particular conditions on the issuance of permits. In contrast, other rules do impose requirements on respondent with respect to the issuance [**22] of permits. *See, e.g., OAR 340-045-0027* (public notice and participation requirements for permitting actions); *OAR 340-045-0033* (requirements for general permits). Indeed, *OAR 340-045-0035*, which governs the issuance of the type of permit at issue in this case, imposes specific requirements on respondent.

Furthermore, *OAR 340-045-0015(5)* does not itself make state water quality standards applicable to storm water dischargers. Instead, it simply requires compliance with "applicable" federal and state water quality standards. The text of the provision, thus, only requires that permittees comply with legal standards that some other source makes applicable to them. As we have observed, pursuant to federal and state statutes, permits for the discharge of municipal storm water, unlike other NPDES permits, need not incorporate provisions requiring compliance with state water quality standards. In the context of storm water, permittees must implement best management practices to reduce the discharge of pollutants in storm water to the maximum extent practicable. *OAR 340-045-0015(5)* does not impose a stricter requirement. Instead, it simply requires that, to the extent that state water quality [**23] standards otherwise apply, a permittee must comply with them. Because those standards are not otherwise strictly applicable to storm water, the rule does not, itself, make them applicable. In sum, we are not persuaded by petitioners' assertion that, because they do not contain specific conditions requiring compliance with in-stream state water quality standards, the permits violate the requirements of *OAR 340-045-0015(5)*.

In their second assignment of error, petitioners argue that respondent acted inconsistently with *ORS 468B.050* and *OAR 340-042-0080* when it issued the permits "because the [p]ermits do not incorporate wasteload allocations as enforceable effluent limitations." Petitioners' argument suggests that wasteload allocations should be set forth [*146] as numeric limits within the permits and that the benchmarks incorporated into the permits are impermissible.

In their argument regarding the statute, petitioners suggest that the permits are inconsistent with the requirements of *ORS 468B.050* and point to that statute's general requirement that permits "shall specify applicable effluent limitations." As discussed above, that statute does not mandate that such effluent limitations take [**24] a particular form. A best management practices requirement is a type of effluent limitation. In this case, the permits included such a limitation (set forth in detail in the incorporated storm water management plans). We reject petitioners' assertion that the permits violate *ORS 468B.050*.

We turn to petitioners' assertion that the permits violate *OAR 340-042-0080*. That rule is part of a set of rules adopted by respondent relating to "total maximum daily loads (TMDLs)." A TMDL is

> "a written quantitative plan and analysis for attaining and maintaining water quality standards and includes the elements described in *OAR 340-042-0040*. These elements include a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet state water quality standards, allocations of portions of that amount to the pollutant sources or sectors, and a Water Quality Management Plan to achieve water quality standards."

OAR 340-042-0030(15). TMDLs are established for pollutants in waters of the state that are identified, pursuant to *33 USC section 1313(d)*, as being water quality impaired. *OAR 340-042-0040(1)*; *see 33 USC § 1313(d)*. Among other things TMDLs must include loading capacities [**25] (the amount of a pollutant that a waterbody can receive and still meet water quality standards), wasteload allocations (the portions of the receiving water's loading capacity allocated to particular point sources), and a water quality management plan (a framework of management strategies to attain and maintain water quality standards, including proposed strategies to meet wasteload allocations in the TMDL). *OAR 340-042-0040(4)*.

As part of the implementation of TMDLs, "[f]or sources subject to permit requirements in *ORS 468B.050*,

[*147] wasteload allocations and other management strategies will be incorporated into permit requirements." *OAR 340-042-0080(4)*. In relation to TMDLs, the term "wasteload allocation" is defined, by rule, to mean "the portion of [the] receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution. [Wasteload allocations] constitute a type of water quality-based effluent limitation." *OAR 340-041-0002(67)*. However, the rule does not specifically provide the manner in which those wasteload allocations must be implemented. Petitioners' argument raises the question whether wasteload allocations have been incorporated into [**26] the permits in a meaningful way. We conclude that they have.

The applicable TMDLs in this case set forth specific wasteload allocations for municipal storm water. The permits at issue, in turn, indicate the bodies of water for which TMDLs and wasteload allocations have been established and reference the specific TMDL for those bodies of water. The permits provide in the "adaptive management" section that, "[w]here TMDL wasteload allocations have been established for pollutant parameters associated with the permittee's [municipal separate storm sewer system] discharges, the permittee must use the estimated pollutant load reductions (benchmarks) established in the [storm water management plan] to guide the adaptive management process." Furthermore, they include a section that specifically addresses the TMDL wasteload allocations. The section is intended to "ensure pollutant discharges for those parameters listed in the TMDL are reduced to the [maximum extent practicable]. Adequate progress toward achieving assigned wasteload allocations * * * will be demonstrated through the implementation of best management practices that are targeted at TMDL-related pollutants." Pursuant to that section, [**27] permittees must evaluate progress toward reducing pollutant loads "through the use of performance measures and pollutant load reduction benchmarks developed and listed in the [storm water management plan]." [16] The storm water management [*148] plan describes a program, including best management practices, designed to achieve reductions in TMDL pollutants. Failure to meet an approved benchmark is not, itself, a violation of permit conditions. However, such a failure gives rise to an obligation on the part of the permittee to follow the adaptive management process to improve the storm water management plan. Failure to engage in that process would be a violation of the permits.

16 A benchmark is defined in the permit as

> "a total pollutant load reduction estimate for each parameter or surrogate, where applicable, for which a [wasteload allocation] is established at the time of permit issuance. A benchmark is used to measure the overall effectiveness of the storm water management plan in making progress toward the wasteload allocation * * * and is intended to be a tool for guiding the adaptive management activities."

In our view, the provisions of the permits are sufficient to meet the requirement [**28] of *OAR 340-042-0080(4)* that wasteload allocations be incorporated into permit requirements. The agency has interpreted what it means to "incorporate" wasteload allocations through its implementation of that rule in the issuance of permits, and that interpretation is a reasonable one. Although the permits do not themselves include numeric wasteload allocations like those set forth in the TMDLs, the TMDL wasteload allocations are clearly referenced in the permits, and the permits require implementation of best management practices, set forth in the storm water management plans, to make progress toward meeting those wasteload allocations. Again, best management practices are a type of effluent limitation that is used in municipal storm water permits. *See 40 CFR § 122.44(k)(2) - (3)*. Furthermore, the permits incorporate benchmarks, through incorporation of the storm water management plan, which are specific pollutant load reduction goals for the permittees. Those measures are "permit requirements" that properly incorporate the TMDL wasteload allocations.

As well, contrary to petitioners' assertion, the permits incorporate wasteload allocations in a way that is enforceable. Although the [**29] failure to reduce pollutants to the extent set forth in a particular benchmark is not itself a violation of the permit, it gives rise to specific obligations on the part of the permittee. Furthermore, the requirement that permittees implement best management practices that are set out in their approved storm water management plan is an enforceable requirement. Looking at the permits in light of [*149] the requirements of the regulatory scheme, we conclude that their provisions are sufficient to meet the requirement of *OAR 340-042-0080* that "wasteload allocations * * * be incorporated into permit requirements."

In light of the foregoing discussion, we conclude that the permits do not violate *ORS 468B.025*, *ORS 468B.050*, *OAR 340-045-0015*, or *OAR 340-042-0080*. Accordingly, the trial court did not err in granting summary judgment in favor of respondent.

TAB "21"

U.S.C. Sections

33 USCS § 1251
§ 1251. Congressional declaration of goals and policy

(a) Restoration and maintenance of chemical, physical and biological integrity of Nation's waters; national goals for achievement of objective. The objective of this Act [33 USCS §§ 1251 et seq.] is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. In order to achieve this objective it is hereby declared that, consistent with the provisions of this Act [33 USCS §§ 1251 et seq.]--

(1) it is the national goal that the discharge of pollutants into the navigable waters be eliminated by 1985;

(2) it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by July 1, 1983;

(3) it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited;

(4) it is the national policy that Federal financial assistance be provided to construct publicly owned waste treatment works;

(5) it is the national policy that areawide waste treatment management planning processes be developed and implemented to assure adequate control of sources of pollutants in each State;

(6) it is the national policy that a major research and demonstration effort be made to develop technology necessary to eliminate the discharge of pollutants into the navigable waters, waters of the contiguous zone, and the oceans; and

(7) it is the national policy that programs for the control of nonpoint sources of pollution be developed and implemented in an expeditious manner so as to enable the goals of this Act [33 USCS §§ 1251 et seq.] to be met through the control of both point and nonpoint sources of pollution.

(b) Congressional recognition, preservation, and protection of primary responsibilities and rights of States. It is the policy of the Congress to recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution, to plan the development and use (including restoration, preservation, and enhancement) of land and water resources, and to consult with the Administrator in the exercise of his authority under this Act [33 USCS §§ 1251 et seq.]. It is the policy of Congress that the States manage the construction grant program under this Act [33 USCS §§ 1251 et seq.] and implement the permit programs under sections 402 and 404 of this Act [33 USCS §§ 1342, 1344]. It is further the policy of the Congress to support and aid research relating to the prevention, reduction, and elimination of pollution, and to provide Federal technical services and financial aid to State and interstate agencies and municipalities in connection with the prevention, reduction, and elimination of pollution.

(c) Congressional policy toward Presidential activities with foreign countries. It is further the policy of Congress that the President, acting through the Secretary of State and such national and international organizations as he determines appropriate, shall take such action as may be necessary to insure that to the fullest extent possible all foreign countries shall take meaningful action for the prevention, reduction, and elimination of pollution in their waters and in international waters and

for the achievement of goals regarding the elimination of discharge of pollutants and the improvement of water quality to at least the same extent as the United States does under its laws.

(d) Administrator of Environmental Protection Agency to administer 33 USCS §§ 1251 et seq. Except as otherwise expressly provided in this Act [33 USCS §§ 1251 et seq.], the Administrator of the Environmental Protection Agency (hereinafter in this Act called "Administrator") shall administer this Act [33 USCS §§ 1251 et seq.].

(e) Public participation in development, revision, and enforcement of any regulation, etc. Public participation in the development, revision, and enforcement of any regulation, standard, effluent limitation, plan, or program established by the Administrator or any State under this Act [33 USCS §§ 1251 et seq.] shall be provided for, encouraged, and assisted by the Administrator and the States. The Administrator, in cooperation with the States, shall develop and publish regulations specifying minimum guidelines for public participation in such processes.

(f) Procedures utilized for implementing 33 USCS §§ 1251 et seq. It is the national policy that to the maximum extent possible the procedures utilized for implementing this Act [33 USCS §§ 1251 et seq.] shall encourage the drastic minimization of paperwork and interagency decision procedures, and the best use of available manpower and funds, so as to prevent needless duplication and unnecessary delays at all levels of government.

(g) Authority of States over water. It is the policy of Congress that the authority of each State to allocate quantities of water within its jurisdiction shall not be superseded, abrogated or otherwise impaired by this Act [33 USCS §§ 1251 et seq.]. It is the further policy of Congress that nothing in this Act [33 USCS §§ 1251 et seq.] shall be construed to supersede or abrogate rights to quantities of water which have been established by any State. Federal agencies shall co-operate with State and local agencies to develop comprehensive solutions to prevent, reduce and eliminate pollution in concert with programs for managing water resources.

33 USCS § 1251

TAB "22"

33 USCS § 1311
§ 1311. Effluent limitations

(a) Illegality of pollutant discharges except in compliance with law. Except as in compliance with this section and sections 302, 306, 307, 318, 402, and 404 of this Act [33 USCS §§ 1312, 1316, 1317, 1328, 1342, 1344], the discharge of any pollutant by any person shall be unlawful.

(b) Timetable for achievement of objectives. In order to carry out the objective of this Act there shall be achieved--

(1) (A) not later than July 1, 1977, effluent limitations for point sources, other than publicly owned treatment works, (i) which shall require the application of the best practicable control technology currently available as defined by the Administrator pursuant to section 304(b) of this Act [33 USCS § 1314(b)], or (ii) in the case of a discharge into a publicly owned treatment works which meets the requirements of subparagraph (B) of this paragraph, which shall require compliance with any applicable pretreatment requirements and any requirements under section 307 of this Act [33 USCS § 1317]; and

(B) for publicly owned treatment works in existence on July 1, 1977, or approved pursuant to section 203 of this Act [33 USCS § 1283] prior to June 30, 1974 (for which construction must be completed within four years of approval), effluent limitations based upon secondary treatment as defined by the Administrator pursuant to section 304(d)(1) of this Act [33 USCS § 1314(d)(1)]; or,

(C) not later than July 1, 1977, any more stringent limitation, including those necessary to meet water quality standards, treatment standards, or schedules of compliance, established pursuant to any State law or regulations (under authority preserved by section 510 [33 USCS § 1370]) or any other Federal law or regulation, or required to implement any applicable water quality standard established pursuant to this Act.

(2) (A) for pollutants identified in subparagraphs (C), (D), and (F) of this paragraph, effluent limitations for categories and classes of point sources, other than publicly owned treatment works, which (i) shall require application of the best available technology economically achievable for such category or class, which will result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants, as determined in accordance with regulations issued by the Administrator pursuant to section 304(b)(2) of this Act [33 USCS § 1314(b)(2)], which such effluent limitations shall require the elimination of discharges of all pollutants if the Administrator finds, on the basis of information available to him (including information developed pursuant to section 315 [33 USCS § 1325]), that such elimination is technologically and economically achievable for a category or class of point sources as determined in accordance with regulations issued by the Administrator pursuant to section 304(b)(2) of this Act [33 USCS § 1314(b)(2)], or (ii) in the case of the introduction of a pollutant into a publicly owned treatment works which meets the requirements of subparagraph (B) of this paragraph, shall require compliance with any applicable pretreatment requirements and any other requirement under section 307 of this Act [33 USCS § 1317];

(B) [Repealed]

(C) with respect to all toxic pollutants referred to in table 1 of Committee Print Numbered 95-30 of the Committee on Public Works and Transportation of the House of Representatives compliance with effluent limitations in accordance with subparagraph (A) of this paragraph as expeditiously as practicable but in no case

later than three years after the date such limitations are promulgated under section 304(b) [33 USCS § 1314(b)], and in no case later than March 31, 1989;

(D) for all toxic pollutants listed under paragraph (1) of subsection (a) of section 307 of this Act [33 USCS § 1317] which are not referred to in subparagraph (C) of this paragraph compliance with effluent limitations in accordance with subparagraph (A) of this paragraph as expeditiously as practicable, but in no case later than three years after the date such limitations are promulgated under section 304(b) [33 USCS § 1314(b)], and in no case later than March 31, 1989;

(E) as expeditiously as practicable but in no case later than three years after the date such limitations are promulgated under section 304(b) [33 USCS § 1314(b)], and in no case later than March 31, 1989, compliance with effluent limitations for categories and classes of point sources, other than publicly owned treatment works, which in the case of pollutants identified pursuant to section 304(a)(4) of this Act [33 USCS § 1314(a)(4)] shall require application of the best conventional pollutant control technology as determined in accordance with regulations issued by the Administrator pursuant to section 304(b)(4) of this Act [33 USCS § 1314(b)(4)]; and

(F) for all pollutants (other than those subject to subparagraphs (C), (D), or (E) of this paragraph) compliance with effluent limitations in accordance with subparagraph (A) of this paragraph as expeditiously as practicable but in no case later than 3 years after the date such limitations are established, and in no case later than March 31, 1989.

(3) (A) for effluent limitations under paragraph (1)(A)(i) of this subsection promulgated after January 1, 1982, and requiring a level of control substantially greater or based on fundamentally different control technology than under permits for an industrial category issued before such date, compliance as expeditiously as practicable but in no case later than three years after the date such limitations are promulgated under section 304(b) [33 USCS § 1314(b)], and in no case later than March 31, 1989; and

(B) for any effluent limitation in accordance with paragraph (1)(A)(i), (2)(A)(i), or (2)(E) of this subsection established only on the basis of section 402(a)(1) [33 USCS § 1342(a)(1)] in a permit issued after enactment of the Water Quality Act of 1987 [enacted Feb. 4, 1987], compliance as expeditiously as practicable but in no case later than three years after the date such limitations are established, and in no case later than March 31, 1989.

(c) Modification of timetable. The Administrator may modify the requirements of subsection (b)(2)(A) of this section with respect to any point source for which a permit application is filed after July 1, 1977, upon a showing by the owner or operator of such point source satisfactory to the Administrator that such modified requirements (1) will represent the maximum use of technology within the economic capability of the owner or operator; and (2) will result in reasonable further progress toward the elimination of the discharge of pollutants.

(d) Review and revision of effluent limitations. Any effluent limitation required by paragraph (2) of subsection (b) of this section shall be reviewed at least every five years and, if appropriate, revised pursuant to the procedure established under such paragraph.

(e) All point discharge source application of effluent limitations. Effluent limitations established pursuant to this section or section 302 of this Act [33 USCS § 1312] shall be applied to all point sources of discharge of pollutants in accordance with the provisions of this Act [33 USCS §§ 1251 et seq.].

(f) Illegality of discharge of radiological, chemical, or biological warfare agents, high-level radioactive waste or medical waste. Notwithstanding any other provisions of this Act [33 USCS §§ 1251 et seq.] it shall be unlawful to discharge any radiological, chemical, or biological warfare agent, any high-level radioactive waste, or any medical waste, into the navigable waters.

(g) Modifications for certain nonconventional pollutants.

(1) General authority. The Administrator, with the concurrence of the State, may modify the requirements of subsection (b)(2)(A) of this section with respect to the discharge from any point source of ammonia, chlorine, color, iron, and total phenols (4AAP) (when determined by the Administrator to be a pollutant covered by subsection (b)(2)(F)) and any other pollutant which the Administrator lists under paragraph (4) of this subsection.

(2) Requirements for granting modifications. A modification under this subsection shall be granted only upon a showing by the owner or operator of a point source satisfactory to the Administrator that--

(A) such modified requirements will result at a minimum in compliance with the requirements of subsection (b)(1)(A) or (C) of this section, whichever is applicable;

(B) such modified requirements will not result in any additional requirements on any other point or nonpoint source; and

(C) such modification will not interfere with the attainment or maintenance of that water quality which shall assure protection of public water supplies, and the protection and propagation of a balanced population of shellfish, fish, and wildlife, and allow recreational activities, in and on the water and such modification will not result in the discharge of pollutants in quantities which may reasonably be anticipated to pose an unacceptable risk to human health or the environment because of bioaccumulation, persistency in the environment, acute toxicity, chronic toxicity (including carcinogenicity, mutagenicity or teratogenicity), or synergistic propensities.

(3) Limitation on authority to apply for subsection (c) modification. If an owner or operator of a point source applies for a modification under this subsection with respect to the discharge of any pollutant, such owner or operator shall be eligible to apply for modification under subsection (c) of this section with respect to such pollutant only during the same time period as he is eligible to apply for a modification under this subsection.

(4) Procedures for listing additional pollutants.

(A) General authority. Up on petition of any person, the Administrator may add any pollutant to the list of pollutants for which modification under this section is authorized (except for pollutants identified pursuant to section 304(a)(4) of this Act [33 USCS § 1314(a)(4)], toxic pollutants subject to section 307(a) of this Act [33 USCS § 1317(a)], and the thermal component of discharges) in accordance with the provisions of this paragraph.

(B) Requirements for listing.

(i) Sufficient information. The person petitioning for listing of an additional pollutant under this subsection shall submit to the Administrator sufficient information to make the determinations required by this subparagraph.

(ii) Toxic criteria determination. The Administrator shall determine whether or not the pollutant meets the criteria for listing as a toxic pollutant under section 307(a) of this Act [33 USCS § 1317(a)].

(iii) Listing as toxic pollutant. If the Administrator determines that the pollutant meets the criteria for listing as a toxic pollutant under section 307(a) [33 USCS § 1317(a)], the Administrator shall list the pollutant as a toxic pollutant under section 307(a) [33 USCS § 1317(a)].

(iv) Nonconventional criteria determination. If the Administrator determines that the pollutant does not meet the criteria for listing as a toxic pollutant under such section and determines that adequate test methods and sufficient data are available to make the determinations required by paragraph (2) of this subsection with respect to the pollutant, the Administrator shall add the pollutant to the list of pollutants specified in paragraph (1) of this subsection for which modifications are authorized under this subsection.

(C) Requirements for filing of petitions. A petition for listing of a pollutant under this paragraph--

(i) must be filed not later than 270 days after the date of promulgation of an applicable effluent guideline under section 304 [33 USCS § 1314];

(ii) may be filed before promulgation of such guideline; and

(iii) may be filed with an application for a modification under paragraph (1) with respect to the discharge of such pollutant.

(D) Deadline for approval of petition. A decision to add a pollutant to the list of pollutants for which modifications under this subsection are authorized must be made within 270 days after the date of promulgation of an applicable effluent guideline under section 304 [33 USCS § 1314].

(E) Burden of proof. The burden of proof for making the determinations under subparagraph (B) shall be on the petitioner.

(5) Removal of pollutants. The Administrator may remove any pollutant from the list of pollutants for which modifications are authorized under this subsection if the Administrator determines that adequate test methods and sufficient data are no longer available for determining whether or not modifications may be granted with respect to such pollutant under paragraph (2) of this subsection.

(h) Modification of secondary treatment requirements. The Administrator, with the concurrence of the State, may issue a permit under section 402 [33 USCS § 1342] which modifies the requirements of subsection (b)(1)(B) of this section with respect to the discharge of any pollutant from a publicly owned treatment works into marine waters, if the applicant demonstrates to the satisfaction of the Administrator that--

(1) there is an applicable water quality standard specific to the pollutant for which the modification is requested, which has been identified under section 304(a)(6) of this Act [33 USCS § 1314(a)(6)];

(2) the discharge of pollutants in accordance with such modified requirements will not interfere, alone or in combination with pollutants from other sources, with the attainment or maintenance of that water quality which assures protection of public water supplies and the protection and propagation of a balanced, indigenous population of shellfish, fish and wildlife, and allows recreational activities, in and on the water;

(3) the applicant has established a system for monitoring the impact of such discharge on a representative sample of aquatic biota, to the extent practicable, and the scope of such monitoring is limited to include only those scientific investigations which are necessary to study the effects of the proposed discharge;

(4) such modified requirements will not result in any additional requirements on any other point or nonpoint source;

(5) all applicable pretreatment requirements for sources introducing waste into such treatment works will be enforced;

(6) in the case of any treatment works serving a population of 50,000 or more, with respect to any toxic pollutant introduced into such works by an industrial discharger for which pollutant there is no applicable pretreatment requirement in effect, sources introducing waste into such works are in compliance with all applicable pretreatment requirements, the applicant will enforce such requirements,

and the applicant has in effect a pretreatment program which, in combination with the treatment of discharges from such works, removes the same amount of such pollutant as would be removed if such works were to apply secondary treatment to discharges and if such works had no pretreatment program with respect to such pollutant;

(7) to the extent practicable, the applicant has established a schedule of activities designed to eliminate the entrance of toxic pollutants from nonindustrial sources into such treatment works;

(8) there will be no new or substantially increased discharges from the point source of the pollutant to which the modification applies above that volume of discharge specified in the permit;

(9) the applicant at the time such modification becomes effective will be discharging effluent which has received at least primary or equivalent treatment and which meets the criteria established under section 304(a)(1) of this Act [33 USCS § 1314(a)(1)] after initial mixing in the waters surrounding or adjacent to the point at which such effluent is discharged.

For the purposes of this subsection the phrase "the discharge of any pollutant into marine waters" refers to a discharge into deep waters of the territorial sea or the waters of the contiguous zone, or into saline estuarine waters where there is strong tidal movement and other hydrological and geological characteristics which the Administrator determines necessary to allow compliance with paragraph (2) of this subsection, and section 101(a)(2) of this Act [33 USCS § 1251(a)(2)]. For the purposes of paragraph (9), "primary or equivalent treatment" means treatment by screening, sedimentation, and skimming adequate to remove at least 30 percent of the biological oxygen demanding material and of the suspended solids in the treatment works influent, and disinfection, where appropriate. A municipality which applies secondary treatment shall be eligible to receive a permit pursuant to this subsection which modifies the requirements of subsection (b)(1)(B) of this section with respect to the discharge of any pollutant from any treatment works owned by such municipality into marine waters. No permit issued under this subsection shall authorize the discharge of sewage sludge into marine waters. In order for a permit to be issued under this subsection for the discharge of a pollutant into marine waters, such marine waters must exhibit characteristics assuring that water providing dilution does not contain significant amounts of previously discharged effluent from such treatment works. No permit issued under this subsection shall authorize the discharge of any pollutant into saline estuarine waters which at the time of application do not support a balanced indigenous population of shellfish, fish and wildlife, or allow recreation in and on the waters or which exhibit ambient water quality below applicable water quality standards adopted for the protection of public water supplies, shellfish, fish and wildlife or recreational activities or such other standards necessary to assure support and protection of such uses. The prohibition contained in the preceding sentence shall apply without regard to the presence or absence of a causal relationship between such characteristics and the applicant's current or proposed discharge. Notwithstanding any other provisions of this subsection, no permit may be issued under this subsection for discharge of a pollutant into the New York Bight Apex consisting of the ocean waters of the Atlantic Ocean westward of 73 degrees 30 minutes west longitude and northward of 40 degrees 10 minutes north latitude.

(i) Municipal time extensions.

(1) Where construction is required in order for a planned or existing publicly owned treatment works to achieve limitations under subsection (b)(1)(B) or (b)(1)(C) of

this section, but (A) construction cannot be completed within the time required in such subsection, or (B) the United States has failed to make financial assistance under this Act [33 USCS §§ 1251 et seq.] available in time to achieve such limitations by the time specified in such subsection, the owner or operator of such treatment works may request the Administrator (or if appropriate the State) to issue a permit pursuant to section 402 of this Act [33 USCS § 1342] or to modify a permit issued pursuant to that section to extend such time for compliance. Any such request shall be filed with the Administrator (or if appropriate the State) within 180 days after the date of enactment of the Water Quality Act of 1987 [enacted Feb. 7, 1987]. The Administrator (or if appropriate the State) may grant such request and issue or modify such a permit, which shall contain a schedule of compliance for the publicly owned treatment works based on the earliest date by which such financial assistance will be available from the United States and construction can be completed, but in no event later than July 1, 1988, and shall contain such other terms and conditions, including those necessary to carry out subsections (b) through (g) of section 201 of this Act [33 USCS § 1281(b)-(g)], section 307 of this Act [33 USCS § 1317], and such interim effluent limitations applicable to that treatment works as the Administrator determines are necessary to carry out the provisions of this Act [33 USCS §§ 1251 et seq.].

(2) (A) Where a point source (other than a publicly owned treatment works) will not achieve the requirements of subsections (b)(1)(A) and (b)(1)(C) of this section and--

(i) if a permit issued prior to July 1, 1977, to such point source is based upon a discharge into a publicly owned treatment works; or

(ii) if such point source (other than a publicly owned treatment works) had before July 1, 1977, a contract (enforceable against such point source) to discharge into a publicly owned treatment works; or

(iii) if either an application made before July 1, 1977, for a construction grant under this Act [33 USCS §§ 1251 et seq.] for a publicly owned treatment works, or engineering or architectural plans or working drawings made before July 1, 1977, for a publicly owned treatment works, show that such point source was to discharge into such publicly owned treatment works,

and such publicly owned treatment works is presently unable to accept such discharge without construction, and in the case of a discharge to an existing publicly owned treatment works, such treatment works has an extension pursuant to paragraph (1) of this subsection, the owner or operator of such point source may request the Administrator (or if appropriate the State) to issue or modify such a permit pursuant to such section 402 [33 USCS § 1342] to extend such time for compliance. Any such request shall be filed with the Administrator (or if appropriate the State) within 180 days after the date of enactment of this subsection [enacted Dec. 27, 1977] or the filing of a request by the appropriate publicly owned treatment works under paragraph (1) of this subsection, whichever is later. If the Administrator (or if appropriate the State) finds that the owner or operator of such point source has acted in good faith, he may grant such request and issue or modify such a permit, which shall contain a schedule of compliance for the point source to achieve the requirements of subsections (b)(1)(A) and (C) of this section and shall contain such other terms and conditions, including pretreatment and interim effluent limitations and water conservation requirements applicable to that point source, as the Administrator determines are necessary to carry out the provisions of this Act [33 USCS §§ 1251 et seq.].

(B) No time modification granted by the Administrator (or if appropriate the State) pursuant to paragraph (2)(A) of this subsection shall extend beyond the earliest date practicable for compliance or beyond the date of any extension granted

to the appropriate publicly owned treatment works pursuant to paragraph (1) of this subsection, but in no event shall it extend beyond July 1, 1988; and no such time modification shall be granted unless (i) the publicly owned treatment works will be in operation and available to the point source before July 1, 1988, and will meet the requirements of subsections (b)(1)(B) and (C) of this section after receiving the discharge from that point source; and (ii) the point source and the publicly owned treatment works have entered into an enforceable contract requiring the point source to discharge into the publicly owned treatment works, the owner or operator of such point source to pay the costs required under section 204 of this Act [33 USCS § 1284], and the publicly owned treatment works to accept the discharge from the point source; and (iii) the permit for such point source requires that point source to meet all requirements under section 307(a) and (b) [33 USCS § 1317(a), (b)] during the period of such time modification.

(j) Modification procedures.

(1) Any application filed under this section for a modification of the provisions of--

(A) subsection (b)(1)(B) under subsection (h) of this section shall be filed not later that [than] the 365th day which begins after the date of enactment of the Municipal Wastewater Treatment Construction Grant Amendments of 1981 [enacted Dec. 29, 1981], except that a publicly owned treatment works which prior to December 31, 1982, had a contractual arrangement to use a portion of the capacity of an ocean outfall operated by another publicly owned treatment works which has applied for or received modification under subsection (h), may apply for a modification of subsection (h) in its own right not later than 30 days after the date of the enactment of the Water Quality Act of 1987 [enacted Feb. 7, 1987], and except as provided in paragraph (5);

(B) subsection (b)(2)(A) as it applies to pollutants identified in subsection (b)(2)(F) shall be filed not later than 270 days after the date of promulgation of an applicable effluent guideline under section 304 [33 USCS § 1314] or not later than 270 days after the date of enactment of the Clean Water Act of 1977 [enacted Dec. 27, 1977], whichever is later.

(2) Subject to paragraph (3) of this section, any application for a modification filed under subsection (g) of this section shall not operate to stay any requirement under this Act [33 USCS §§ 1251 et seq.], unless in the judgment of the Administrator such a stay or the modification sought will not result in the discharge of pollutants in quantities which may reasonably be anticipated to pose an unacceptable risk to human health or the environment because of bioaccumulation, persistency in the environment, acute toxicity, chronic toxicity (including carcinogenicity, mutagenicity, or teratogenicity), or synergistic propensities, and that there is a substantial likelihood that the applicant will succeed on the merits of such application. In the case of an application filed under subsection (g) of this section, the Administrator may condition any stay granted under this paragraph on requiring the filing of a bond or other appropriate security to assure timely compliance with the requirements from which a modification is sought.

(3) Compliance requirements under subsection (g).

(A) Effect of filing. An application for a modification under subsection (g) and a petition for listing of a pollutant as a pollutant for which modifications are authorized under such subsection shall not stay the requirement that the person seeking such modification or listing comply with effluent limitations under this Act [33 USCS §§ 1251 et seq.] for all pollutants not the subject of such application or petition.

(B) Effect of disapproval. Disapproval of an application for a modification under subsection (g) shall not stay the requirement that the person seeking such modification comply with all applicable effluent limitations under this Act [33 USCS

§§ 1251 et seq.].

(4) Deadline for subsection (g) decision. An application for a modification with respect to a pollutant filed under subsection (g) must be approved or disapproved not later than 365 days after the date of such filing; except that in any case in which a petition for listing such pollutant as a pollutant for which modifications are authorized under such subsection is approved, such application must be approved or disapproved not later than 365 days after the date of approval of such petition.

(5) Extension of application deadline.

(A) In general. In the 180-day period beginning on the date of the enactment of this paragraph [enacted Oct. 31, 1994], the city of San Diego, California, may apply for a modification pursuant to subsection (h) of the requirements of subsection (b)(1)(B) with respect to biological oxygen demand and total suspended solids in the effluent discharged into marine waters.

(B) Application. An application under this paragraph shall include a commitment by the applicant to implement a waste water reclamation program that, at a minimum, will--

(i) achieve a system capacity of 45,000,000 gallons of reclaimed waste water per day by January 1, 2010; and

(ii) result in a reduction in the quantity of suspended solids discharged by the applicant into the marine environment during the period of the modification.

(C) Additional conditions. The Administrator may not grant a modification pursuant to an application submitted under this paragraph unless the Administrator determines that such modification will result in removal of not less than 58 percent of the biological oxygen demand (on an annual average) and not less than 80 percent of total suspended solids (on a monthly average) in the discharge to which the application applies. A

(D) Preliminary decision deadline. The Administrator shall announce a preliminary decision on an application submitted under this paragraph not later than 1 year after the date the application is submitted.

(k) Innovative technology. In the case of any facility subject to a permit under section 402 [33 USCS § 1342] which proposes to comply with the requirements of subsection (b)(2)(A) or (b)(2)(E) of this section by replacing existing production capacity with an innovative production process which will result in an effluent reduction significantly greater than that required by the limitation otherwise applicable to such facility and moves toward the national goal of eliminating the discharge of all pollutants, or with the installation of an innovative control technique that has a substantial likelihood for enabling the facility to comply with the applicable effluent limitation by achieving a significantly greater effluent reduction than that required by the applicable effluent limitation and moves toward the national goal of eliminating the discharge of all pollutants, or by achieving the required reduction with an innovative system that has the potential for significantly lower costs than the systems which have been determined by the Administrator to be economically achievable, the Administrator (or the State with an approved program under section 402 [33 USCS § 1342], in consultation with the Administrator) may establish a date for compliance under subsection (b)(2)(A) or (b)(2)(E) of this section no later than two years after the date for compliance with such effluent limitation which would otherwise be applicable under such subsection, if it is also determined that such innovative system has the potential for industry-wide application.

(l) Toxic pollutants. Other than as provided in subsection (n) of this section, the Administrator may not modify any requirement of this section as it applies to any specific pollutant which is on the toxic pollutant list under section 307(a)(1) of this

Act [33 USCS § 1317(a)(1)].

(m) Modification of effluent limitation requirements for point sources.

(1) The Administrator, with the concurrence of the State, may issue a permit under section 402 [33 USCS § 1342] which modifies the requirements of subsections (b)(1)(A) and (b)(2)(E) of this section, and of section 403 [33 USCS § 1343], with respect to effluent limitations to the extent such limitations relate to biochemical oxygen demand and pH from discharges by an industrial discharger in such State into deep waters of the territorial seas, if the applicant demonstrates and the Administrator finds that--

(A) the facility for which modification is sought is covered at the time of the enactment of this subsection [enacted Jan. 8, 1983] by National Pollutant Discharge Elimination System permit number CA0005894 or CA0005282;

(B) the energy and environmental costs of meeting such requirements of subsections (b)(1)(A) and (b)(2)(E) and section 403 [33 USCS § 1343] exceed by an unreasonable amount the benefits to be obtained, including the objectives of this Act [33 USCS §§ 1251 et seq.];

(C) the applicant has established a system for monitoring the impact of such discharges on a representative sample of aquatic biota;

(D) such modified requirements will not result in any additional requirements on any other point or nonpoint source;

(E) there will be no new or substantially increased discharges from the point source of the pollutant to which the modification applies above that volume of discharge specified in the permit;

(F) the discharge is into waters where there is strong tidal movement and other hydrological and geological characteristics which are necessary to allow compliance with this subsection and section 101(a)(2) of this Act [33 USCS § 1251(a)(2)];

(G) the applicant accepts as a condition to the permit a contractural [contractual] obligation to use funds in the amount required (but not less than $ 250,000 per year for ten years) for research and development of water pollution control technology, including but not limited to closed cycle technology;

(H) the facts and circumstances present a unique situation which, if relief is granted, will not establish a precedent or the relaxation of the requirements of this Act [33 USCS §§ 1251 et seq.] applicable to similarly situated discharges; and

(I) no owner or operator of a facility comparable to that of the applicant situated in the United States has demonstrated that it would be put at a competitive disadvantage to the applicant (or the parent company or any subsidiary thereof) as a result of the issuance of a permit under this subsection.

(2) The effluent limitations established under a permit issued under paragraph (1) shall be sufficient to implement the applicable State water quality standards, to assure the protection of public water supplies and protection and propagation of a balanced, indigenous population of shellfish, fish, fauna, wildlife, and other aquatic organisms, and to allow recreational activities in and on the water. In setting such limitations, the Administrator shall take into account any seasonal variations and the need for an adequate margin of safety, considering the lack of essential knowledge concerning the relationship between effluent limitations and water quality and the lack of essential knowledge of the effects of discharges on beneficial uses of the receiving waters.

(3) A permit under this subsection may be issued for a period not to exceed five years, and such a permit may be renewed for one additional period not to exceed five years upon a demonstration by the applicant and a finding by the Administrator at the time of application for any such renewal that the provisions of this subsection are met.

(4) The Administrator may terminate a permit issued under this subsection if the Administrator determines that there has been a decline in ambient water quality of the receiving waters during the period of the permit even if a direct cause and effect relationship cannot be shown: Provided, That if the effluent from a source with a permit issued under this subsection is contributing to a decline in ambient water quality of the receiving waters, the Administrator shall terminate such permit.

(n) Fundamentally different factors.

(1) General rule. The Administrator, with the concurrence of the State, may establish an alternative requirement under subsection (b)(2) or section 307(b) [33 USCS § 1317(b)] for a facility that modifies the requirements of national effluent limitation guidelines or categorical pretreatment standards that would otherwise be applicable to such facility, if the owner or operator of such facility demonstrates to the satisfaction of the Administrator that--

(A) the facility is fundamentally different with respect to the factors (other than cost) specified in section 304(b) or 304(g) and considered by the Administrator in establishing such national effluent limitation guidelines or categorical pretreatment standards;

(B) the application--

(i) is based solely on information and supporting data submitted to the Administrator during the rule-making for establishment of the applicable national effluent limitation guidelines or categorical pretreatment standard specifically raising the factors that are fundamentally different for such facility; or

(ii) is based on information and supporting data referred to in clause (i) and information and supporting data the applicant did not have a reasonable opportunity to submit during such rulemaking;

(C) the alternative requirement is no less stringent than justified by the fundamental difference; and

(D) the alternative requirement will not result in a nonwater quality environmental impact which is markedly more adverse than the impact considered by the Administrator in establishing such national effluent limitation guideline or categorical pretreatment standard.

(2) Time limit for applications. An application for an alternative requirement which modifies the requirements of an effluent limitation or pretreatment standard under this subsection must be submitted to the Administrator within 180 days after the date on which such limitation or standard is established or revised, as the case may be.

(3) Time limit for decision. The Administrator shall approve or deny by final agency action an application submitted under this subsection within 180 days after the date such application is filed with the Administrator.

(4) Submission of information. The Administrator may allow an applicant under this subsection to submit information and supporting data until the earlier of the date the application is approved or denied or the last day that the Administrator has to approve or deny such application.

(5) Treatment of pending applications. For the purposes of this subsection, an application for an alternative requirement based on fundamentally different factors which is pending on the date of the enactment of this subsection [enacted Feb. 7, 1987] shall be treated as having been submitted to the Administrator on the 180th day following such date of enactment [enacted Feb. 7, 1987]. The applicant may amend the application to take into account the provisions of this subsection.

(6) Effect of submission of application. An application for an alternative requirement under this subsection shall not stay the applicant's obligation to comply with the effluent limitation guideline or categorical pretreatment standard which is

the subject of the application.

(7) Effect of denial. If an application for an alternative requirement which modifies the requirements of an effluent limitation or pretreatment standard under this subsection is denied by the Administrator, the applicant must comply with such limitation or standard as established or revised, as the case may be.

(8) Reports. By January 1, 1997, and January 1 of every odd-numbered year thereafter, the Administrator shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives a report on the status of applications for alternative requirements which modify the requirements of effluent limitations under section 301 or 304 of this Act [33 USCS § 1311 or 1314] or any national categorical pretreatment standard under section 307(b) of this Act [33 USCS § 1317(b)] filed before, on, or after such date of enactment [enacted Feb. 7, 1987].

(o) Application fees. The Administrator shall prescribe and collect from each applicant fees reflecting the reasonable administrative costs incurred in reviewing and processing applications for modifications submitted to the Administrator pursuant to subsections (c), (g), (i), (k), (m), and (n) of section 301, section 304(d)(4), and section 316(a) of this Act [33 USCS §§ 1311(c), (g), (i), (k), (m), (n), 1314(d)(4), 1316(a)]. All amounts collected by the Administrator under this subsection shall be deposited into a special fund of the Treasury entitled "Water Permits and Related Services" which shall thereafter be available for appropriation to carry out activities of the Environmental Protection Agency for which such fees were collected.

(p) Modified permit for coal remining operations.

(1) In general. Subject to paragraphs (2) through (4) of this subsection, the Administrator, or the State in any case which the State has an approved permit program under section 402(b) [33 USCS § 1342(b)], may issue a permit under section 402 [33 USCS § 1342] which modifies the requirements of subsection (b)(2)(A) of this section with respect to the pH level of any pre-existing discharge, and with respect to pre-existing discharges of iron and manganese from the remined area of any coal remining operation or with respect to the pH level or level of iron or manganese in any pre-existing discharge affected by the remaining operation. Such modified requirements shall apply the best available technology economically achievable on a case-by-case basis, using best professional judgment, to set specific numerical effluent limitations in each permit.

(2) Limitations. The Administrator or the State may only issue a permit pursuant to paragraph (1) if the applicant demonstrates to the satisfaction of the Administrator or the State, as the case may be, that the coal remining operation will result in the potential for improved water quality from the remining operation but in no event shall such a permit allow the pH level of any discharge, and in no event shall such a permit allow the discharges of iron and manganese, to exceed the levels being discharged from the remined area before the coal remining operation begins. No discharge from, or affected by, the remining operation shall exceed State water quality standards established under section 303 of this Act [33 USCS § 1313].

(3) Definitions. For purposes of this subsection--

(A) Coal remining operation. The term "coal remining operation" means a coal mining operation which begins after the date of the enactment of this subsection [enacted Feb. 4, 1987] at a site on which coal mining was conducted before the effective date of the Surface Mining Control and Reclamation Act of 1977.

(B) Remined area. The term "remined area" means only that area of any coal remining operation on which coal mining was conducted before the effective date of

the Surface Mining Control and Reclamation Act of 1977.

(C) Pre-existing discharge. The term "pre-existing discharge" means any discharge at the time of permit application under this subsection.

(4) Applicability of strip mining laws. Nothing in this subsection shall affect the application of the Surface Mining Control and Reclamation Act of 1977 to any coal remining operation, including the application of such Act to suspended solids.

33 USCS § 1311

TAB "23"

33 U.C.S. § 1313. Water quality standards and implementation plans

(a) Existing water quality standards.

(1) In order to carry out the purpose of this Act [33 USCS §§ 1251 et seq.], any water quality standard applicable to interstate waters which was adopted by any State and submitted to, and approved by, or is awaiting approval by, the Administrator pursuant to this Act as in effect immediately prior to the date of enactment of the Federal Water Pollution Control Act Amendments of 1972 [enacted Oct. 18, 1972], shall remain in effect unless the Administrator determined that such standard is not consistent with the applicable requirements of this Act as in effect immediately prior to the date of enactment of the Federal Water Pollution Control Act Amendments of 1972 [enacted Oct. 18, 1972]. If the Administrator makes such a determination he shall, within three months after the date of enactment of the Federal Water Pollution Control Act Amendments of 1972 [enacted Oct. 18, 1972], notify the State and specify the changes needed to meet such requirements. If such changes are not adopted by the State within ninety days after the date of such notification, the Administrator shall promulgate such changes in accordance with subsection (b) of this section.

(2) Any State which, before the date of enactment of the Federal Water Pollution Control Act Amendments of 1972 [enacted Oct. 18, 1972], has adopted, pursuant to its own law, water quality standards applicable to intrastate waters shall submit such standards to the Administrator within thirty days after the date of enactment of the Federal Water Pollution Control Act Amendments of 1972 [enacted Oct. 18, 1972]. Each such standard shall remain in effect, in the same manner and to the same extent as any other water quality standard established under this Act [33 USCS §§ 1251 et seq.] unless the Administrator determines that such standard is inconsistent with the applicable requirements of this Act as in effect immediately prior to the date of enactment of the Federal Water Pollution Control Act Amendments of 1972 [enacted Oct. 18, 1972]. If the Administrator makes such a determination he shall not later than the one hundred and twentieth day after the date of submission of such standards, notify the State and specify the changes needed to meet such requirements. If such changes are not adopted by the State within ninety days after such notification, the Administrator shall promulgate such changes in accordance with subsection (b) of this section.

(3) (A) Any State which prior to the date of enactment of the Federal Water Pollution Control Act Amendments of 1972 [enacted Oct. 18, 1972] has not adopted pursuant to its own laws water quality standards applicable to intrastate waters shall, not later than one hundred and eighty days after the date of enactment of the Federal Water Pollution Control Act Amendments of 1972 [enacted Oct. 18, 1972], adopt and submit such standards to the Administrator.

(B) If the Administrator determines that any such standards are consistent with the applicable requirements of this Act as in effect immediately prior to the date of enactment of the Federal Water Pollution Control Act Amendments of 1972 [enacted Oct. 18, 1972], he shall approve such standards.

(C) If the Administrator determines that any such standards are not consistent with the applicable requirements of this Act as in effect immediately prior to the date of enactment of the Federal Water Pollution Control Act Amendments of 1972 [enacted Oct. 18, 1972], he shall, not later than the ninetieth day after the date of submission of such standards, notify the State and specify the changes to meet such requirements. If such changes are not adopted by the State within ninety days after the date of notification, the Administrator shall promulgate such standards pursuant

to subsection (b) of this section.

(b) Proposed regulations.

(1) The Administrator shall promptly prepare and publish proposed regulations setting forth water quality standards for a State in accordance with the applicable requirements of this Act as in effect immediately prior to the date of enactment of the Federal Water Pollution Control Act Amendments of 1972 [enacted Oct. 18, 1972], if--

(A) the State fails to submit water quality standards within the times prescribed in subsection (a) of this section.

(B) a water quality standard submitted by such State under subsection (a) of this section is determined by the Administrator not to be consistent with the applicable requirements of subsection (a) of this section.

(2) The Administrator shall promulgate any water quality standard published in a proposed regulation not later than one hundred and ninety days after the date he publishes any such proposed standard, unless prior to such promulgation, such State has adopted a water quality standard which the Administrator determines to be in accordance with subsection (a) of this section.

(c) Review; revised standards; publication.

(1) The Governor of a State or the State water pollution control agency of such State shall from time to time (but at least once each three year period beginning with the date of enactment of the Federal Water Pollution Control Act Amendments of 1972 [enacted Oct. 18, 1972]) hold public hearings for the purpose of reviewing applicable water quality standards and, as appropriate, modifying and adopting standards. Results of such review shall be made available to the Administrator.

(2) (A) Whenever the State revises or adopts a new standard, such revised or new standard shall be submitted to the Administrator. Such revised or new water quality standard shall consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses. Such standards shall be such as to protect the public health or welfare, enhance the quality of water and serve the purposes of this Act [33 USCS §§ 1251 et seq.]. Such standards shall be established taking into consideration their use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other purposes, and also taking into consideration their use and value for navigation.

(B) Whenever a State reviews water quality standards pursuant to paragraph (1) of this subsection, or revises or adopts new standards pursuant to this paragraph, such State shall adopt criteria for all toxic pollutants listed pursuant to section 307(a)(1) of this Act [33 USCS § 1317(a)(1)] for which criteria have been published under section 304(a) [33 USCS § 1314(a)], the discharge or presence of which in the affected waters could reasonably be expected to interfere with those designated uses adopted by the State, as necessary to support such designated uses. Such criteria shall be specific numerical criteria for such toxic pollutants. Where such numerical criteria are not available, whenever a State reviews water quality standards pursuant to paragraph (1), or revises or adopts new standards pursuant to this paragraph, such State shall adopt criteria based on biological monitoring or assessment methods consistent with information published pursuant to section 304(a)(8) [33 USCS § 1314(a)(8)]. Nothing in this section shall be construed to limit or delay the use of effluent limitations or other permit conditions based on or involving biological monitoring or assessment methods or previously adopted numerical criteria.

(3) If the Administrator, within sixty days after the date of submission of the revised or new standard, determines that such standard meets the requirements of

this Act [33 USCS §§ 1251 et seq.], such standard shall thereafter be the water quality standard for the applicable waters of that State. If the Administrator determines that any such revised or new standard is not consistent with the applicable requirements of this Act [33 USCS §§ 1251 et seq.], he shall not later than the ninetieth day after the date of submission of such standard notify the State and specify the changes to meet such requirements. If such changes are not adopted by the State within ninety days after the date of notification, the Administrator shall promulgate such standard pursuant to paragraph (4) of this subsection.

(4) The Administrator shall promptly prepare and publish proposed regulations setting forth a revised or new water quality standard for the navigable waters involved--

(A) if a revised or new water quality standard submitted by such State under paragraph (3) of this subsection for such waters is determined by the Administrator not to be consistent with the applicable requirements of this Act [33 USCS §§ 1251 et seq.], or

(B) in any case where the Administrator determines that a revised or new standard is necessary to meet the requirements of this Act [33 USCS §§ 1251 et seq.].

The Administrator shall promulgate any revised or new standard under this paragraph not later than ninety days after he publishes such proposed standards, unless prior to such promulgation, such State has adopted a revised or new water quality standard which the Administrator determines to be in accordance with this Act [33 USCS §§ 1251 et seq.].

(d) Identification of areas with insufficient controls; maximum daily load; certain effluvient limitations revision.

(1) (A) Each State shall identify those waters within its boundaries for which the effluent limitations required by section 301(b)(1)(A) and section 301(b)(1)(B) [33 USCS § 1311(b)(1)(A), (B)] are not stringent enough to implement any water quality standard applicable to such waters. The State shall establish a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of such waters.

(B) Each State shall identify those waters or parts thereof within its boundaries for which controls on thermal discharges under section 301 [33 USCS § 1311] are not stringent enough to assure protection and propagation of a balanced indigenous population of shellfish, fish, and wildlife.

(C) Each State shall establish for the waters identified in paragraph (1)(A) of this subsection, and in accordance with the priority ranking, the total maximum daily load, for those pollutants which the Administrator identifies under section 304(a)(2) [33 USCS § 1314(a)(2)] as suitable for such calculation. Such load shall be established at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality.

(D) Each State shall estimate for the waters identified in paragraph (1)(B) of this subsection the total maximum daily thermal load required to assure protection and propagation of a balanced, indigenous population of shellfish, fish and wildlife. Such estimates shall take into account the normal water temperatures, flow rates, seasonal variations, existing sources of heat input, and the dissipative capacity of the identified waters or parts thereof. Such estimates shall include a calculation of the maximum heat input that can be made into each such part and shall include a margin of safety which takes into account any lack of knowledge concerning the development of thermal water quality criteria for such protection and propagation in

the identified waters or parts thereof.

(2) Each State shall submit to the Administrator from time to time, with the first such submission not later than one hundred and eighty days after the date of publication of the first identification of pollutants under section 304(a)(2)(D) [33 USCS § 1314(a)(2)(D)], for his approval the waters identified and the loads established under paragraphs (1)(A), (1)(B), (1)(C), and (1)(D) of this subsection. The Administrator shall either approve or disapprove such identification and load not later than thirty days after the date of submission. If the Administrator approves such identification and load, such State shall incorporate them into its current plan under subsection (e) of this section. If the Administrator disapproves such identification and load, he shall not later than thirty days after the date of such disapproval identify such waters in such State and establish such loads for such waters as he determines necessary to implement the water quality standards applicable to such waters and upon such identification and establishment the State shall incorporate them into its current plan under subsection (e) of this section.

(3) For the specific purpose of developing information, each State shall identify all waters within its boundaries which it has not identified under paragraph (1)(A) and (1)(B) of this subsection and estimate for such waters the total maximum daily load with seasonal variations and margins of safety, for those pollutants which the Administrator identifies under section 304(a)(2) [33 USCS § 1314(a)(2)] as suitable for such calculation and for thermal discharges, at a level that would assure protection and propagation of a balanced indigenous population of fish, shellfish and wildlife.

(4) Limitations on revision of certain effluent limitations.

(A) Standard not attained. For waters identified under paragraph (1)(A) where the applicable water quality standard has not yet been attained, any effluent limitation based on a total maximum daily load or other waste load allocation established under this section may be revised only if (i) the cumulative effect of all such revised effluent limitations based on such total maximum daily load or waste load allocation will assure the attainment of such water quality standard, or (ii) the designated use which is not being attained is removed in accordance with regulations established under this section.

(B) Standard attained. For waters identified under paragraph (1)(A) where the quality of such waters equals or exceeds levels necessary to protect the designated use for such waters or otherwise required by applicable water quality standards, any effluent limitation based on a total maximum daily load or other waste load allocation established under this section, or any water quality standard established under this section, or any other permitting standard may be revised only if such revision is subject to and consistent with the antidegradation policy established under this section.

(e) Continuing planning process.

(1) Each State shall have a continuing planning process approved under paragraph (2) of this subsection which is consistent with this Act [33 USCS §§ 1251 et seq.].

(2) Each State shall submit not later than 120 days after the date of the enactment of the Water Pollution Control Amendments of 1972 [enacted Oct. 18, 1972] to the Administrator for his approval a proposed continuing planning process which is consistent with this Act [33 USCS §§ 1251 et seq.]. Not later than thirty days after the date of submission of such a process the Administrator shall either approve or disapprove such process. The Administrator shall from time to time review each State's approved planning process for the purpose of insuring that such planning process is at all times consistent with this Act [33 USCS §§ 1251 et seq.]. The Administrator shall not approve any State permit program under title IV of this

Act [33 USCS §§ 1341 et seq.] for any State which does not have an approved continuing planning process under this section.

(3) The Administrator shall approve any continuing planning process submitted to him under this section which will result in plans for all navigable waters within such State, which include, but are not limited to, the following:

(A) effluent limitations and schedules of compliance at least as stringent as those required by section 301(b)(1), section 301(b)(2), section 306, and section 307 [33 USCS §§ 1311(b)(1), (2), 1316, 1317], and at least as stringent as any requirements contained in any applicable water quality standard in effect under authority of this section;

(B) the incorporation of all elements of any applicable area-wide waste management plans under section 208 [33 USCS § 1288], and applicable basin plans under section 209 of this Act [33 USCS § 1289];

(C) total maximum daily load for pollutants in accordance with subsection (d) of this section;

(D) procedures for revision;

(E) adequate authority for intergovernmental cooperation;

(F) adequate implementation, including schedules of compliance, for revised or new water quality standards, under subsection (c) of this section;

(G) controls over the disposition of all residual waste from any water treatment processing;

(H) an inventory and ranking, in order of priority, of needs for construction of waste treatment works required to meet the applicable requirements of sections 301 and 302 [33 USCS §§ 1311, 1312].

(f) Earlier compliance. Nothing in this section shall be construed to affect any effluent limitation, or schedule of compliance required by any State to be implemented prior to the dates set forth in sections 301(b)(1) and 301(b)(2) [33 USCS § 1311(b)(1), (2)] nor to preclude any State from requiring compliance with any effluent limitation or schedule of compliance at dates earlier than such dates.

(g) Heat standards. Water quality standards relating to heat shall be consistent with the requirements of section 316 of this Act [33 USCS § 1326].

(h) Thermal water quality standards. For the purposes of this Act [33 USCS §§ 1251 et seq.] the term "water quality standards" includes thermal water quality standards.

(i) Coastal recreation water quality criteria.

(1) Adoption by States.

(A) Initial criteria and standards. Not later than 42 months after the date of the enactment of this subsection [enacted Oct. 10, 2000], each State having coastal recreation waters shall adopt and submit to the Administrator water quality criteria and standards for the coastal recreation waters of the State for those pathogens and pathogen indicators for which the Administrator has published criteria under section 304(a) [33 USCS § 1314(a)].

(B) New or revised criteria and standards. Not later than 36 months after the date of publication by the Administrator of new or revised water quality criteria under section 304(a)(9) [33 USCS § 1314(a)(9)], each State having coastal recreation waters shall adopt and submit to the Administrator new or revised water quality standards for the coastal recreation waters of the State for all pathogens and pathogen indicators to which the new or revised water quality criteria are applicable.

(2) Failure of States to adopt.

(A) In general. If a State fails to adopt water quality criteria and standards in

accordance with paragraph (1)(A) that are as protective of human health as the criteria for pathogens and pathogen indicators for coastal recreation waters published by the Administrator, the Administrator shall promptly propose regulations for the State setting forth revised or new water quality standards for pathogens and pathogen indicators described in paragraph (1)(A) for coastal recreation waters of the State.

(B) Exception. If the Administrator proposes regulations for a State described in subparagraph (A) under subsection (c)(4)(B), the Administrator shall publish any revised or new standard under this subsection not later than 42 months after the date of the enactment of this subsection [enacted Oct. 10, 2000].

(3) Applicability. Except as expressly provided by this subsection, the requirements and procedures of subsection (c) apply to this subsection, including the requirement in subsection (c)(2)(A) that the criteria protect public health and welfare.

33 USCS § 1313

TAB "24"

33 U.S.C. § 1342. National pollutant discharge elimination system

(a) Permits for discharge of pollutants.

(1) Except as provided in sections 318 and 404 of this Act [33 USCS §§ 1328, 1344], the Administrator may, after opportunity for public hearing, issue a permit for the discharge of any pollutant, or combination of pollutants, notwithstanding section 301(a) [33 USCS § 1311(a)], upon condition that such discharge will meet either (A) all applicable requirements under sections 301, 302, 306, 307, 308, and 403 of this Act [33 USCS §§ 1311, 1312, 1316, 1317, 1318, 1343], (B) or prior to the taking of necessary implementing actions relating to all such requirements, such conditions as the Administrator determines are necessary to carry out the provisions of this Act [33 USCS §§ 1251 et seq.].

(2) The Administrator shall prescribe conditions for such permits to assure compliance with the requirements of paragraph (1) of this subsection, including conditions on data and information collection, reporting, and such other requirements as he deems appropriate.

(3) The permit program of the Administrator under paragraph (1) of this subsection, and permits issued thereunder, shall be subject to the same terms, conditions, and requirements as apply to a State permit program and permits issued thereunder under subsection (b) of this section.

(4) All permits for discharges into the navigable waters issued pursuant to section 13 of the Act of March 3, 1899 [33 USCS § 407], shall be deemed to be permits issued under this title [33 USCS §§ 1341 et seq.], and permits issued under this title [33 USCS §§ 1341 et seq.] shall be deemed to be permits issued under section 13 of the Act of March 3, 1899 [33 USCS § 407], and shall continue in force and effect for their term unless revoked, modified, or suspended in accordance with the provisions of this Act [33 USCS §§ 1251 et seq.].

(5) No permit for a discharge into the navigable waters shall be issued under section 13 of the Act of March 3, 1899 [33 USCS § 407], after the date of enactment of this title [enacted Oct. 18, 1972]. Each application for a permit under section 13 of the Act of March 3, 1899 [33 USCS § 407], pending on the date of enactment of this Act [enacted Oct. 18, 1972], shall be deemed to be an application for a permit under this section. The Administrator shall authorize a State, which he determines has the capability of administering a permit program which will carry out the objective of this Act [33 USCS §§ 1251 et seq.], to issue permits for discharges into the navigable waters within the jurisdiction of such State. The Administrator may exercise the authority granted him by the preceding sentence only during the period which begins on the date of enactment of this Act [enacted Oct. 18, 1972] and ends either on the ninetieth day after the date of the first promulgation of guidelines required by section 304(h)(2) [304(i)(2)] of this Act [33 USCS § 1314(i)(2)], or the date of approval by the Administrator of a permit program for such State under subsection (b) of this section whichever date first occurs, and no such authorization to a State shall extend beyond the last day of such period. Each such permit shall be subject to such conditions as the Administrator determines are necessary to carry out the provisions of this Act [33 USCS §§ 1251 et seq.]. No such permit shall issue if the Administrator objects to such issuance.

(b) State permit programs. At any time after the promulgation of the guidelines required by subsection (h)(2) of section 304 [304(i)(2)] of this Act [33 USCS § 1314(i)(2)], the Governor of each State desiring to administer its own permit

program for discharges into navigable waters within its jurisdiction may submit to the Administrator a full and complete description of the program it proposes to establish and administer under State law or under an interstate compact. In addition, such State shall submit a statement from the attorney general (or the attorney for those State water pollution control agencies which have independent legal counsel), or from the chief legal officer in the case of an interstate agency, that the laws of such State, or the interstate compact, as the case may be, provide adequate authority to carry out the described program. The Administrator shall approve each such submitted program unless he determines that adequate authority does not exist:

(1) To issue permits which--

(A) apply, and insure compliance with, any applicable requirements of sections 301, 302, 306, 307, and 403 [33 USCS §§ 1311, 1312, 1316, 1317, 1343];

(B) are for fixed terms not exceeding five years; and

(C) can be terminated or modified for cause including, but not limited to, the following:

(i) violation of any condition of the permit;

(ii) obtaining a permit by misrepresentation, or failure to disclose fully all relevant facts;

(iii) change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge;

(D) control the disposal of pollutants into wells;

(2) (A) To issue permits which apply, and insure compliance with, all applicable requirements of section 308 of this Act [33 USCS § 1318] or

(B) To inspect, monitor, enter, and require reports to at least the same extent as required in section 308 of this Act [33 USCS § 1318];

(3) To insure that the public, and any other State the waters of which may be affected, receive notice of each application for a permit and to provide an opportunity for public hearing before a ruling on each such application;

(4) To insure that the Administrator receives notice of each application (including a copy thereof) for a permit;

(5) To insure that any State (other than the permitting State), whose waters may be affected by the issuance of a permit may submit written recommendations to the permitting State (and the Administrator) with respect to any permit application and, if any part of such written recommendations are not accepted by the permitting State, that the permitting State will notify such affected State (and the Administrator) in writing of its failure to so accept such recommendations together with its reasons for so doing;

(6) To insure that no permit will be issued if, in the judgment of the Secretary of the Army acting through the Chief of Engineers, after consultation with the Secretary of the department in which the Coast Guard is operating, anchorage and navigation of any of the navigable waters would be substantially impaired thereby;

(7) To abate violations of the permit or the permit program, including civil and criminal penalties and other ways and means of enforcement;

(8) To insure that any permit for a discharge from a publicly owned treatment works includes conditions to require the identification in terms of character and volume of pollutants of any significant source introducing pollutants subject to pretreatment standards under section 307(b) of this Act [33 USCS § 1317(b)] into such works and a program to assure compliance with such pretreatment standards by each such source, in addition to adequate notice to the permitting agency of (A) new introductions into such works of pollutants from any source which would be a new source as defined in section 306 [33 USCS § 1316] if such source were discharging pollutants, (B) new introductions of pollutants into such works from a

source which would be subject to section 301 [33 USCS § 1311] if it were discharging such pollutants, or (C) a substantial change in volume or character of pollutants being introduced into such works by a source introducing pollutants into such works at the time of issuance of the permit. Such notice shall include information on the quality and quantity of effluent to be introduced into such treatment works and any anticipated impact of such change in the quantity or quality of effluent to be discharged from such publicly owned treatment works; and

(9) To insure that any industrial user of any publicly owned treatment works will comply with sections 204(b), 307, and 308 [33 USCS §§ 1284(b), 1317, 1318].

(c) Suspension of Federal program upon submission of State program; withdrawal of approval of State program; return of State program to Administrator.

(1) Not later than ninety days after the date on which a State has submitted a program (or revision thereof) pursuant to subsection (b) of this section, the Administrator shall suspend the issuance of permits under subsection (a) of this section as to those discharges subject to such program unless he determines that the State permit program does not meet the requirements of subsection (b) of this section or does not conform to the guidelines issued under section 304(h)(2) [304(i)(2)] of this Act [33 USCS § 1314(i)(2)]. If the Administrator so determines, he shall notify the State of any revisions or modifications necessary to conform to such requirements or guidelines.

(2) Any State permit program under this section shall at all times be in accordance with this section and guidelines promulgated pursuant to section 304(h)(2) [304(i)(2)] of this Act [33 USCS § 1314(i)(2)].

(3) Whenever the Administrator determines after public hearing that a State is not administering a program approved under this section in accordance with requirements of this section, he shall so notify the State and, if appropriate corrective action is not taken within a reasonable time, not to exceed ninety days, the Administrator shall withdraw approval of such program. The Administrator shall not withdraw approval of any such program unless he shall first have notified the State, and made public, in writing, the reasons for such withdrawal.

(4) Limitations on partial permit program returns and withdrawals. A State may return to the Administrator administration, and the Administrator may withdraw under paragraph (3) of this subsection approval, of--

(A) a State partial permit program approved under subsection (n)(3) only if the entire permit program being administered by the State department or agency at the time is returned or withdrawn; and

(B) a State partial permit program approved under subsection (n)(4) only if an entire phased component of the permit program being administered by the State at the time is returned or withdrawn.

(d) Notification of Administrator.

(1) Each State shall transmit to the Administrator a copy of each permit application received by such State and provide notice to the Administrator of every action related to the consideration of such permit application, including each permit proposed to be issued by such State.

(2) No permit shall issue (A) if the Administrator within ninety days of the date of his notification under subsection (b)(5) of this section objects in writing to the issuance of such permit, or (B) of the Administrator within ninety days of the date of transmittal of the proposed permit by the State objects in writing to the issuance of such permit as being outside the guidelines and requirements of this Act [33 USCS §§ 1251 et seq.]. Whenever the Administrator objects to the issuance of a permit under this paragraph such written objection shall contain a statement of the reasons

for such objection and the effluent limitations and conditions which such permit would include if it were issued by the Administrator.

(3) The Administrator may, as to any permit application, waive paragraph (2) of this subsection.

(4) In any case where, after the date of enactment of this paragraph [enacted Dec. 27, 1977], the Administrator, pursuant to paragraph (2) of this subsection, objects to the issuance of a permit, on request of the State, a public hearing shall be held by the Administrator on such objection. If the State does not resubmit such permit revised to meet such objection within 30 days after completion of the hearing, or, if no hearing is requested within 90 days after the date of such objection, the Administrator may issue the permit pursuant to subsection (a) of this section for such source in accordance with the guidelines and requirements of this Act [33 USCS §§ 1251 et seq.].

(e) Waiver of notification requirement. In accordance with guidelines promulgated pursuant to subsection (h)(2) of section 304 [304(i)(2)] of this Act [33 USCS § 1314(i)(2)], the Administrator is authorized to waive the requirements of subsection (d) of this section at the time he approves a program pursuant to subsection (b) of this section for any category (including any class, type, or size within such category) of point sources within the State submitting such program.

(f) Point source categories. The Administrator shall promulgate regulations establishing categories of point sources which he determines shall not be subject to the requirements of subsection (d) of this section in any State with a program approved pursuant to subsection (b) of this section. The Administrator may distinguish among classes, types, and sizes within any category of point sources.

(g) Other regulations for safe transportation, handling, carriage, storage, and stowage of pollutants. Any permit issued under this section for the discharge of pollutants into the navigable waters from a vessel or other floating craft shall be subject to any applicable regulations promulgated by the Secretary of the department in which the Coast Guard is operating, establishing specifications for safe transportation, handling, carriage, storage, and stowage of pollutants.

(h) Violation of permit conditions; restriction or prohibition upon introduction of pollutant by source not previously utilizing treatment works. In the event any condition of a permit for discharges from a treatment works (as defined in section 212 of this Act [33 USCS § 1292]) which is publicly owned is violated, a State with a program approved under subsection (b) of this section or the Administrator, where no State program is approved or where the Administrator determines pursuant to section 309(a) of this Act [33 USCS § 1319(a)] that a State with an approved program has not commenced appropriate enforcement action with respect to such permit, may proceed in a court of competent jurisdiction to restrict or prohibit the introduction of any pollutant into such treatment works by a source not utilizing such treatment works prior to the finding that such condition was violated.

(i) Federal enforcement not limited. Nothing in this section shall be construed to limit the authority of the Administrator to take action pursuant to section 309 of this Act [33 USCS § 1319].

(j) Public information. A copy of each permit application and each permit issued under this section shall be available to the public. Such permit application or permit, or portion thereof, shall further be available on request for the purpose of

reproduction.

(k) Compliance with permits. Compliance with a permit issued pursuant to this section shall be deemed compliance, for purposes of sections 309 and 505 [33 USCS §§ 1319, 1365], with sections 301, 302, 306, 307, and 403 [33 USCS §§ 1311, 1312, 1316, 1317, 1343], except any standard imposed under section 307 [33 USCS § 1317] for a toxic pollutant injurious to human health. Until December 31, 1974, in any case where a permit for discharge has been applied for pursuant to this section, but final administrative disposition of such application has not been made, such discharge shall not be a violation of (1) section 301, 306, or 402 of this Act [33 USCS § 1311, 1316, or 1342], or (2) section 13 of the Act of March 3, 1899 [33 USCS § 407], unless the Administrator or other plaintiff proves that final administrative disposition of such application has not been made because of the failure of the applicant to furnish information reasonably required or requested in order to process the application. For the 180-day period beginning on the date of enactment of the Federal Water Pollution Control Act Amendments of 1972 [enacted Oct. 18, 1972], in the case of any point source discharging any pollutant or combination of pollutants immediately prior to such date of enactment which source is not subject to section 13 of the Act of March 3, 1899 [33 USCS § 407], the discharge by such source shall not be a violation of this Act [33 USCS §§ 1251 et seq.] if such a source applies for a permit for discharge pursuant to this section within such 180-day period.

(l) Limitation on permit requirement.

(1) Agricultural return flows. The Administrator shall not require a permit under this section for discharges composed entirely of return flows from irrigated agriculture, nor shall the Administrator directly or indirectly, require any State to require such a permit.

(2) Stormwater runoff from oil, gas, and mining operations. The Administrator shall not require a permit under this section, nor shall the Administrator directly or indirectly require any State to require a permit, for discharges of stormwater runoff from mining operations or oil and gas exploration, production, processing, or treatment operations or transmission facilities, composed entirely of flows which are from conveyances or systems of conveyances (including but not limited to pipes, conduits, ditches, and channels) used for collecting and conveying precipitation runoff and which are not contaminated by contact with, or do not come into contact with, any overburden, raw material, intermediate products, finished product, byproduct, or waste products located on the site of such operations.

(m) Additional pretreatment of conventional pollutants not required. To the extent a treatment works (as defined in section 212 of this Act [33 USCS § 1292]) which is publicly owned is not meeting the requirements of a permit issued under this section for such treatment works as a result of inadequate design or operation of such treatment works, the Administrator, in issuing a permit under this section, shall not require pretreatment by a person introducing conventional pollutants identified pursuant to section 304(a)(4) of this Act [33 USCS § 1314(a)(4)] into such treatment works other than pretreatment required to assure compliance with pretreatment standards under subsection (b)(8) of this section and section 307(b)(1) of this Act [33 USCS § 1317(b)(1)]. Nothing in this subsection shall affect the Administrator's authority under sections 307 and 309 of this Act [33 USCS §§ 1317, 1319], affect State and local authority under sections 307(b)(4) and 510 of this Act [33 USCS §§ 1317(b)(4), 1370], relieve such treatment works of its obligations to meet requirements established under this Act [33 USCS §§ 1251 et seq.], or

otherwise preclude such works from pursuing whatever feasible options are available to meet its responsibility to comply with its permit under this section.

(n) Partial permit program.

(1) State submission. The Governor of a State may submit under subsection (b) of this section a permit program for a portion of the discharges into the navigable waters in such State.

(2) Minimum coverage. A partial permit program under this subsection shall cover, at a minimum, administration of a major category of the discharges into the navigable waters of the State or a major component of the permit program required by subsection (b).

(3) Approval or major category partial permit programs. The Administrator may approve a partial permit program covering administration of a major category of discharges under this subsection if--

(A) such program represents a complete permit program and covers all of the discharges under the jurisdiction of a department or agency of the State; and

(B) the Administrator determines that the partial program represents a significant and identifiable part of the State program required by subsection (b).

(4) Approval of major component partial permit programs. The Administrator may approve under this subsection a partial and phased permit program covering administration of a major component (including discharge categories) of a State permit program required by subsection (b) if--

(A) the Administrator determines that the partial program represents a significant and identifiable part of the State program required by subsection (b); and

(B) the State submits, and the Administrator approves, a plan for the State to assume administration by phases of the remainder of the State program required by subsection (b) by a specified date not more than 5 years after submission of the partial program under this subsection and agrees to make all reasonable efforts to assume such administration by such date.

(o) Anti-backsliding.

(1) General prohibition. In the case of effluent limitations established on the basis of subsection (a)(1)(B) of this section, a permit may not be renewed, reissued, or modified on the basis of effluent guidelines promulgated under section 304(b) [33 USCS § 1314(b)] subsequent to the original issuance of such permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit. In the case of effluent limitations established on the basis of section 301(b)(1)(C) or section 303 (d) or (e) [33 USCS § 1311(b)(1)(C) or 1313(d) or (e)], a permit may not be renewed, reissued, or modified to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit except in compliance with section 303(d)(4) [33 USCS § 1313(d)(4)].

(2) Exceptions. A permit with respect to which paragraph (1) applies may be renewed, reissued, or modified to contain a less stringent effluent limitation applicable to a pollutant if--

(A) material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation;

(B) (i) information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance; or

(ii) the Administrator determines that technical mistakes or mistaken

interpretations of law were made in issuing the permit under subsection (a)(1)(B);

(C) a less stringent effluent limitation is necessary because of events over which the permittee has no control and for which there is no reasonably available remedy;

(D) the permittee has received a permit modification under section 301(c), 301(g), 301(h), 301(i), 301(k), 301(n), or 316(a) [33 USCS § 1311(c), (g), (h), (i), (k), (n), or 1326(a)]; or

(E) the permittee has installed the treatment facilities required to meet the effluent limitations in the previous permit and has properly operated and maintained the facilities but has nevertheless been unable to achieve the previous effluent limitations, in which case the limitations in the reviewed, reissued, or modified permit may reflect the level of pollutant control actually achieved (but shall not be less stringent than required by effluent guidelines in effect at the time of permit renewal, reissuance, or modification). Subparagraph (B) shall not apply to any revised waste load allocations or any alternative grounds for translating water quality standards into effluent limitations, except where the cumulative effect of such revised allocations results in a decrease in the amount of pollutants discharged into the concerned waters, and such revised allocations are not the result of a discharger eliminating or substantially reducing its discharge of pollutants due to complying with the requirements of this Act [33 USCS §§ 1251 et seq.] or for reasons otherwise unrelated to water quality.

(3) Limitations. In no event may a permit with respect to which paragraph (1) applies be renewed, reissued, or modified to contain an effluent limitation which is less stringent than required by effluent guidelines in effect at the time the permit is renewed, reissued, or modified. In no event may such a permit to discharge into waters be renewed, reissued, or modified to contain a less stringent effluent limitation if the implementation of such limitation would result in a violation of a water quality standard under section 303 [33 USCS § 1313] applicable to such waters.

(p) Municipal and industrial stormwater discharges.

(1) General rule. Prior to October 1, 1994, the Administrator or the State (in the case of a permit program approved under section 402 of this Act [this section]) shall not require a permit under this section for discharges composed entirely of stormwater.

(2) Exceptions. Paragraph (1) shall not apply with respect to the following stormwater discharges:

(A) A discharge with respect to which a permit has been issued under this section before the date of the enactment of this subsection [enacted Feb. 4, 1987].

(B) A discharge associated with industrial activity.

(C) A discharge from a municipal separate storm sewer system serving a population of 250,000 or more.

(D) A discharge from a municipal separate storm sewer system serving a population of 100,000 or more but less than 250,000.

(E) A discharge for which the Administrator or the State, as the case may be, determines that the stormwater discharge contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States.

(3) Permit requirements.

(A) Industrial discharges. Permits for discharges associated with industrial activity shall meet all applicable provisions of this section and section 301 [33 USCS § 1311].

(B) Municipal discharge. Permits for discharges from municipal storm sewers--

(i) may be issued on a system- or jurisdiction-wide basis;

(ii) shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers; and

(iii) shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.

(4) Permit application requirements.

(A) Industrial and large municipal discharges. Not later than 2 years after the date of the enactment of this subsection [enacted Feb. 4, 1987], the Administrator shall establish regulations setting forth the permit application requirements for stormwater discharges described in paragraphs (2)(B) and (2)(C). Applications for permits for such discharges shall be filed no later than 3 years after such date of enactment [enacted Feb. 4, 1987]. Not later than 4 years after such date of enactment [enacted Feb. 4, 1987], the Administrator or the State, as the case may be, shall issue or deny each such permit. Any such permit shall provide for compliance as expeditiously as practicable, but in no event later than 3 years after the date of issuance of such permit.

(B) Other municipal discharges. Not later than 4 years after the date of the enactment of this subsection [enacted Feb. 4, 1987], the Administrator shall establish regulations setting forth the permit application requirements for stormwater discharges described in paragraph (2)(D). Applications for permits for such discharges shall be filed no later than 5 years after such date of enactment [enacted Feb. 4, 1987]. Not later than 6 years after such date of enactment [enacted Feb. 4, 1987], the Administrator or the State, as the case may be, shall issue or deny each such permit. Any such permit shall provide for compliance as expeditiously as practicable, but in no event later than 3 years after the date of issuance of such permit.

(5) Studies. The Administrator, in consultation with the States, shall conduct a study for the purposes of--

(A) identifying those stormwater discharges or classes of stormwater discharges for which permits are not required pursuant to paragraphs (1) and (2) of this subsection;

(B) determining, to the maximum extent practicable, the nature and extent of pollutants in such discharges; and

(C) establishing procedures and methods to control stormwater discharges to the extent necessary to mitigate impacts on water quality.

Not later than October 1, 1988, the Administrator shall submit to Congress a report on the results of the study described in subparagraphs (A) and (B). Not later than October 1, 1989, the Administrator shall submit to Congress a report on the results of the study described in subparagraph (C).

(6) Regulations. Not later than October 1, 1993, the Administrator, in consultation with State and local officials, shall issue regulations (based on the results of the studies conducted under paragraph (5)) which designate stormwater discharges, other than those discharges described in paragraph (2), to be regulated to protect water quality and shall establish a comprehensive program to regulate such designated sources. The program shall, at a minimum, (A) establish priorities, (B) establish requirements for State stormwater management programs, and (C) establish expeditious deadlines. The program may include performance standards, guidelines, guidance, and management practices and treatment requirements, as appropriate.

(q) Combined sewer overflows.

(1) Requirement for permits, orders, and decrees. Each permit, order, or decree

issued pursuant to this Act [33 USCS §§ 1251 et seq.] after the date of enactment of this subsection [enacted Dec. 21, 2000] for a discharge from a municipal combined storm and sanitary sewer shall conform to the Combined Sewer Overflow Control Policy signed by the Administrator on April 11, 1994 (in this subsection referred to as the "CSO control policy").

(2) Water quality and designated use review guidance. Not later than July 31, 2001, and after providing notice and opportunity for public comment, the Administrator shall issue guidance to facilitate the conduct of water quality and designated use reviews for municipal combined sewer overflow receiving waters.

(3) Report. Not later than September 1, 2001, the Administrator shall transmit to Congress a report on the progress made by the Environmental Protection Agency, States, and municipalities in implementing and enforcing the CSO control policy.

(r) Discharges incidental to the normal operation of recreational vessels. No permit shall be required under this Act [33 USCS §§ 1251 et seq.] by the Administrator (or a State, in the case of a permit program approved under subsection (b)) for the discharge of any graywater, bilge water, cooling water, weather deck runoff, oil water separator effluent, or effluent from properly functioning marine engines, or any other discharge that is incidental to the normal operation of a vessel, if the discharge is from a recreational vessel.

33 USCS § 1342

TAB "25"

LEXSTAT 33 USC 1370

*** CURRENT THROUGH PL 111-191, APPROVED 6/15/2010 ***

TITLE 33. NAVIGATION AND NAVIGABLE WATERS
CHAPTER 26. WATER POLLUTION PREVENTION AND CONTROL
GENERAL PROVISIONS

Go to the United States Code Service Archive Directory

33 USCS § 1370

§ 1370. State authority

Except as expressly provided in this Act [*33 USCS §§ 1251* et seq.], nothing in this Act [*33 USCS §§ 1251* et seq.] shall (1) preclude or deny the right of any State or political subdivision thereof or interstate agency to adopt or enforce (A) any standard or limitation respecting discharges of pollutants, or (B) any requirement respecting control or abatement of pollution; except that if an effluent limitation, or other limitation, effluent standard, prohibition, pretreatment standard, or standard of performance is in effect under this Act [*33 USCS §§ 1251* et seq.], such State or political subdivision or interstate agency may not adopt or enforce any effluent limitation, or other limitation, effluent standard, prohibition, pretreatment standard, or standard of performance which is less stringent than the effluent limitation, or other limitation, effluent standard, prohibition, pretreatment standard, or standard of performance under this Act [*33 USCS §§ 1251* et seq.]; or (2) be construed as impairing or in any manner affecting any right or jurisdiction of the States with respect to the waters (including boundary waters) of such States.

HISTORY:
(June 30, 1948, ch. 758, Title V, § 510, as added, Oct. 18, 1972, P.L. 92-500, § 2, 86 Stat. 893.)

TAB "26"

LEXSTAT 40 CFR 122.2

*** THIS SECTION IS CURRENT THROUGH THE JUNE 17, 2010 ISSUE OF ***
*** THE FEDERAL REGISTER ***

TITLE 40 -- PROTECTION OF ENVIRONMENT
CHAPTER I -- ENVIRONMENTAL PROTECTION AGENCY
SUBCHAPTER D -- WATER PROGRAMS
PART 122 -- EPA ADMINISTERED PERMIT PROGRAMS: THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
SUBPART A -- DEFINITIONS AND GENERAL PROGRAM REQUIREMENTS

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40 CFR 122.2

§ 122.2 Definitions.

The following definitions apply to parts 122, 123, and 124. Terms not defined in this section have the meaning given by CWA. When a defined term appears in a definition, the defined term is sometimes placed in quotation marks as an aid to readers.

Administrator means the Administrator of the United States Environmental Protection Agency, or an authorized representative.

Animal feeding operation is defined at § 122.23.

Applicable standards and limitations means all State, interstate, and federal standards and limitations to which a "discharge," a "sewage sludge use or disposal practice," or a related activity is subject under the CWA, including "effluent limitations," water quality standards, standards of performance, toxic effluent standards or prohibitions, "best management practices," pretreatment standards, and "standards for sewage sludge use or disposal" under sections 301, 302, 303, 304, 306, 307, 308, 403 and 405 of CWA.

Application means the EPA standard national forms for applying for a permit, including any additions, revisions or modifications to the forms; or forms approved by EPA for use in "approved States," including any approved modifications or revisions.

Approved program or approved State means a State or interstate program which has been approved or authorized by EPA under part 123.

Aquaculture project is defined at § 122.25.

Average monthly discharge limitation means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month.

Average weekly discharge limitation means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week.

Best management practices ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of "waters of the United States." BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

BMPs means "best management practices."

Bypass is defined at § 122.41(m).

Class I sludge management facility means any POTW identified under 40 CFR 403.8(a) as being required to have an approved pretreatment program (including such POTWs located in a State that has elected to assume local program responsibilities pursuant to 40 CFR 403.10(e)) and any other treatment works treating domestic sewage classified as a Class I sludge management facility by the Regional Administrator, or, in the case of approved State programs, the Regional Administrator in conjunction with the State Director, because of the potential for its sludge use or disposal practices to adversely affect public health and the environment.

Concentrated animal feeding operation is defined at § 122.23.

Concentrated aquatic animal feeding operation is defined at § 122.24.

Contiguous zone means the entire zone established by the United States under Article 24 of the Convention on the Territorial Sea and the Contiguous Zone.

Continuous discharge means a "discharge" which occurs without interruption throughout the operating hours of the facility, except for infrequent shutdowns for maintenance, process changes, or other similar activities.

CWA means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Public Law 92-500, as amended by Public Law 95-217, Public Law 95-576, Public Law 96-483 and Public Law 97-117, *33 U.S.C. 1251* et seq.

CWA and regulations means the Clean Water Act (CWA) and applicable regulations promulgated thereunder. In the case of an approved State program, it includes State program requirements.

Daily discharge means the "discharge of a pollutant" measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

Direct discharge means the "discharge of a pollutant."

Director means the Regional Administrator or the State Director, as the context requires, or an authorized representative. When there is no "approved State program," and there is an EPA administered program, "Director" means the Regional Administrator. When there is an approved State program, "Director" normally means the State Director. In some circumstances, however, EPA retains the authority to take certain actions even when there is an approved State program. (For example, when EPA has issued an NPDES permit prior to the approval of a State program, EPA may retain jurisdiction over that permit after program approval, see § 123.1.) In such cases, the term "Director" means the Regional Administrator and not the State Director.

Discharge when used without qualification means the "discharge of a pollutant."

Discharge of a pollutant means:

(a) Any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source," or

(b) Any addition of any pollutant or combination of pollutants to the waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation.

This definition includes additions of pollutants into waters of the United States from: surface runoff which is collected or channelled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. This term does not include an addition of pollutants by any "indirect discharger."

Discharge Monitoring Report ("DMR") means the EPA uniform national form, including any subsequent additions, revisions, or modifications for the reporting of self-monitoring results by permittees. DMRs must be used by "approved States" as well as by EPA. EPA will supply DMRs to any approved State upon request. The EPA national forms may be modified to substitute the State Agency name, address, logo, and other similar information, as appropriate, in place of EPA's.

DMR means "Discharge Monitoring Report."

Draft permit means a document prepared under § 124.6 indicating the Director's tentative decision to issue or deny, modify, revoke and reissue, terminate, or reissue a "permit." A notice of intent to terminate a permit, and a notice of intent to deny a permit, as discussed in § 124.5, are types of "draft permits." A denial of a request for modification, revocation and reissuance, or termination, as discussed in § 124.5, is not a "draft permit." A "proposed permit" is not a "draft permit."

Effluent limitation means any restriction imposed by the Director on quantities, discharge rates, and concentrations of "pollutants" which are "discharged" from "point sources" into "waters of the United States," the waters of the "contiguous zone," or the ocean.

Effluent limitations guidelines means a regulation published by the Administrator under section 304(b) of CWA to adopt or revise "effluent limitations."

Environmental Protection Agency ("EPA") means the United States Environmental Protection Agency.

EPA means the United States "Environmental Protection Agency."

Facility or activity means any NPDES "point source" or any other facility or activity (including land or appurtenances thereto) that is subject to regulation under the NPDES program.

Federal Indian reservation means all land within the limits of any Indian *67981 reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and including rights-of-way running through the reservation.

General permit means an NPDES "permit" issued under § 122.28 authorizing a category of discharges under the CWA within a geographical area.

Hazardous substance means any substance designated under 40 CFR part 116 pursuant to section 311 of CWA.

Indian country means:

(1) All land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation;

(2) All dependent Indian communities with the borders of the United States whether within the originally or subsequently acquired territory thereof, and whether within or without the limits of a state; and

(3) All Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same.

Indian Tribe means any Indian Tribe, band, group, or community recognized by the Secretary of the Interior and exercising governmental authority over a Federal Indian reservation.

Indirect discharger means a nondomestic discharger introducing "pollutants" to a "publicly owned treatment works."

Individual control strategy is defined at 40 CFR 123.46(c).

Interstate agency means an agency of two or more States established by or under an agreement or compact approved by the Congress, or any other agency of two or more States having substantial powers or duties pertaining to the control of pollution as determined and approved by the Administrator under the CWA and regulations.

Major facility means any NPDES "facility or activity" classified as such by the Regional Administrator, or, in the case of "approved State programs," the Regional Administrator in conjunction with the State Director.

Maximum daily discharge limitation means the highest allowable "daily discharge."

Municipal separate storm sewer system is defined at § 122.26 (b)(4) and (b)(7).

Municipality means a city, town, borough, county, parish, district, association, or other public body created by or under State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved managment agency under section 208 of CWA.

National Pollutant Discharge Elimination System (NPDES) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of CWA. The term includes an "approved program."

New discharger means any building, structure, facility, or installation:

(a) From which there is or may be a "discharge of pollutants;"

(b) That did not commence the "discharge of pollutants" at a particular "site" prior to August 13, 1979;

(c) Which is not a "new source;" and

(d) Which has never received a finally effective NDPES permit for discharges at that "site."

This definition includes an "indirect discharger" which commences discharging into "waters of the United States" after August 13, 1979. It also includes any existing mobile point source (other than an offshore or coastal oil and gas exploratory drilling rig or a coastal oil and gas developmental drilling rig) such as a seafood processing rig, seafood processing vessel, or aggregate plant, that begins discharging at a "site" for which it does not have a permit; and any offshore or coastal mobile oil and gas exploratory drilling rig or coastal mobile oil and gas developmental drilling rig that commences the discharge of pollutants after August 13, 1979, at a "site" under EPA's permitting jurisdiction for which it is not covered by an individual or general permit and which is located in an area determined by the Regional Administrator in the issuance of a final permit to be an area or biological concern. In determining whether an area is an area of biological concern, the Regional Administrator shall consider the factors specified in 40 CFR 125.122(a) (1) through (10).

An offshore or coastal mobile exploratory drilling rig or coastal mobile developmental drilling rig will be considered a "new discharger" only for the duration of its discharge in an area of biological concern.

New source means any building, structure, facility, or installation from which there is or may be a "discharge of pollutants," the construction of which commenced:

(a) After promulgation of standards of performance under section 306 of CWA which are applicable to such source, or

(b) After proposal of standards of performance in accordance with section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with section 306 within 120 days of their proposal.

NPDES means "National Pollutant Discharge Elimination System."

Owner or operator means the owner or operator of any "facility or activity" subject to regulation under the NPDES program.

Permit means an authorization, license, or equivalent control document issued by EPA or an "approved State" to implement the requirements of this part and parts 123 and 124. "Permit" includes an NPDES "general permit" (§ 122.28). Permit does not include any permit which has not yet been the subject of final agency action, such as a "draft permit" or a "proposed permit."

Person means an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof.

Point source means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff. (See § 122.3).

Pollutant means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended *(42 U.S.C. 2011* et seq.)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. It does not mean:

(a) Sewage from vessels; or

(b) Water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposed of in a well, if the well used either to facilitate production or for disposal purposes is approved by authority of the State in which the well is located, and if the State determines that the injection or disposal will not result in the degradation of ground or surface water resources.

NOTE: Radioactive materials covered by the Atomic Energy Act are those encompassed in its definition of source, byproduct, or special nuclear materials. Examples of materials not covered include radium and accelerator-produced isotopes. See *Train v. Colorado Public Interest Research Group, Inc., 426 U.S. 1 (1976).*

POTW is defined at § 403.3 of this chapter.

Primary industry category means any industry category listed in the NRDC settlement agreement (*Natural Resources Defense Council et al. v. Train, 8 E.R.C. 2120 (D.D.C. 1976),* modified *12 E.R.C. 1833 (D.D.C. 1979));* also listed in appendix A of part 122.

Privately owned treatment works means any device or system which is (a) used to treat wastes from any facility whose operator is not the operator of the treatment works and (b) not a "POTW."

Process wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Proposed permit means a State NPDES "permit" prepared after the close of the public comment period (and, when applicable, any public hearing and administrative appeals) which is sent to EPA for review before final issuance by the State. A "proposed permit" is not a "draft permit."

Publicly owned treatment works is defined at 40 CFR 403.3.

Recommencing discharger means a source which recommences discharge after terminating operations.

Regional Administrator means the Regional Administrator of the appropriate Regional Office of the Environmental Protection Agency or the authorized representative of the Regional Administrator.

Schedule of compliance means a schedule of remedial measures included in a "permit", including an enforceable sequence of interim requirements (for example, actions, operations, or milestone events) leading to compliance with the CWA and regulations.

Secondary industry category means any industry category which is not a "primary industry category."

Secretary means the Secretary of the Army, acting through the Chief of Engineers.

Septage means the liquid and solid material pumped from a septic tank, cesspool, or similar domestic sewage treatment system, or a holding tank when the system is cleaned or maintained.

Sewage from vessels means human body wastes and the wastes from toilets and other receptacles intended to receive or retain body wastes that are discharged from vessels and regulated under section 312 of CWA, except that with respect to commercial vessels on the Great Lakes this term includes graywater. For the purposes of this definition, "graywater" means galley, bath, and shower water.

Sewage Sludge means any solid, semi-solid, or liquid residue removed during the treatment of municipal waste water or domestic sewage. Sewage sludge includes, but is not limited to, solids removed during primary, secondary, or advanced waste water treatment, scum, septage, portable toilet pumpings, type III marine sanitation device pumpings

(33 CFR part 159), and sewage sludge products. Sewage sludge does not include grit or screenings, or ash generated during the incineration of sewage sludge.

Sewage sludge use or disposal practice means the collection, storage, treatment, transportation, processing, monitoring, use, or disposal of sewage sludge.

Silvicultural point source is defined at § 122.27.

Site means the land or water area where any "facility or activity" is physically located or conducted, including adjacent land used in connection with the facility or activity.

Sludge-only facility means any "treatment works treating domestic sewage" whose methods of sewage sludge use or disposal are subject to regulations promulgated pursuant to section 405(d) of the CWA and is required to obtain a permit under § 122.1(b)(2).

Standards for sewage sludge use or disposal means the regulations promulgated pursuant to section 405(d) of the CWA which govern minimum requirements for sludge quality, management practices, and monitoring and 6reporting applicable to sewage sludge or the use or disposal of sewage sludge by any person.

State means any of the 50 States, the District of Columbia, Guam, the Commonwealth of Puerto Rico, the Virgin Islands, American Samoa, the Commonwealth of the Northern Mariana Islands, the Trust Territory of the Pacific Islands, or an Indian Tribe as defined in these regulations which meets the requirements of § 123.31 of this chapter.

State Director means the chief administrative officer of any State or interstate agency operating an "approved program," or the delegated representative of the State Director. If responsibility is divided among two or more State or interstate agencies, "State Director" means the chief administrative officer of the State or interstate agency authorized to perform the particular procedure or function to which reference is made.

State/EPA Agreement means an agreement between the Regional Administrator and the State which coordinates EPA and State activities, responsibilities and programs including those under the CWA programs.

Storm water is defined at § 122.26(b)(13).

Storm water discharge associated with industrial activity is defined at § 122.26(b)(14).

Total dissolved solids means the total dissolved (filterable) solids as determined by use of the method specified in 40 CFR part 136.

Toxic pollutant means any pollutant listed as toxic under section 307(a)(1) or, in the case of "sludge use or disposal practices," any pollutant identified in regulations implementing section 405(d) of the CWA.

Treatment works treating domestic sewage means a POTW or any other sewage sludge or waste water treatment devices or systems, regardless of ownership (including federal facilities), used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated for the disposal of sewage sludge. This definition does not include septic tanks or similar devices. For purposes of this definition, "domestic sewage" includes waste and waste water from humans or household operations that are discharged to or otherwise enter a treatment works. In States where there is no approved State sludge management program under section 405(f) of the CWA, the Regional Administrator may designate any person subject to the standards for sewage sludge use and disposal in 40 CFR part 503 as a "treatment works treating domestic sewage," where he or she finds that there is a potential for adverse effects on public health and the environment from poor sludge quality or poor sludge handling, use or disposal practices, or where he or she finds that such designation is necessary to ensure that such person is in compliance with 40 CFR part 503.

TWTDS means "treatment works treating domestic sewage."

Upset is defined at § 122.41(n).

Variance means any mechanism or provision under section 301 or 316 of CWA or under 40 CFR part 125, or in the applicable "effluent limitations guidelines" which allows modification to or waiver of the generally applicable effluent limitation requirements or time deadlines of CWA. This includes provisions which allow the establishment of alternative limitations based on fundamentally different factors or on sections 301(c), 301(g), 301(h), 301(i), or316(a) of CWA.

Waters of the United States or waters of the U.S. means:

(a) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

(b) All interstate waters, including interstate "wetlands;"

(c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:

(1) Which are or could be used by interstate or foreign travelers for recreational or other purposes;

(2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

(3) Which are used or could be used for industrial purposes by industries in interstate commerce;

(d) All impoundments of waters otherwise defined as waters of the United States under this definition;

(e) Tributaries of waters identified in paragraphs (a) through (d) of this definition;

(f) The territorial sea; and

(g) "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States. This exclusion applies only to manmade bodies of water which neither were originally created in waters of the United States (such as disposal area in wetlands) nor resulted from the impoundment of waters of the United States. [See Note 1 of this section.] Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA.

Wetlands means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Whole effluent toxicity means the aggregate toxic effect of an effluent measured directly by a toxicity test.

NOTE: At *45 FR 48620,* July 21, 1980, the Environmental Protection Agency suspended until further notice in § 122.2, the last sentence, beginning "This exclusion applies . . ." in the definition of "Waters of the United States." This revision continues that suspension. n1

n1 EDITORIAL NOTE: The words "This revision" refer to the document published at *48 FR 14153,* Apr. 1, 1983.

HISTORY: *[48 FR 14153,* Apr. 1, 1983, as amended at *48 FR 39619,* Sept. 1, 1983; *50 FR 6940, 6941,* Feb. 19, 1985; *54 FR 254,* Jan. 4, 1989; *54 FR 18781,* May 2, 1989; *54 FR 23895,* June 2, 1989; *58 FR 45037,* Aug. 25, 1993 as corrected at *58 FR 48424,* Sept. 15, 1993; *58 FR 67980,* Dec. 22, 1993; *64 FR 41434, 42462,* Aug. 4, 1999, as corrected at *64 FR 43426,* Aug. 10, 1999; *65 FR 30886, 30905,* May 15, 2000]

AUTHORITY: (Clean Water Act *(33 U.S.C. 1251* et seq.), Safe Drinking Water Act *(42 U.S.C. 300f* et seq.), Clean Air Act *(42 U.S.C. 7401* et seq.), Resource Conservation and Recovery Act (42U.S.C. 6901 et seq.))

NOTES: [EFFECTIVE DATE NOTE: *64 FR 41434, 42462,* Aug. 4, 1999, added the definitions for "Indian Country" and "TWTDS," effective Dec. 2, 1999; *65 FR 30886, 30905,* May 15, 2000, amended this section, effective June 14, 2000.]

NOTES APPLICABLE TO ENTIRE CHAPTER:
[PUBLISHER'S NOTE: Nomenclature changes to Chapter I appear at *65 FR 47323, 47324, 47325,* Aug. 2, 2000.]
[PUBLISHER'S NOTE: For Federal Register citations concerning Chapter 1 Notice of implementation policy, see: *71 FR 25504,* May 1, 2006.]

[PUBLISHER'S NOTE: For Federal Register citations concerning Chapter 1 Findings, see: *74 FR 66496,* Dec. 15, 2009.]

NOTES APPLICABLE TO ENTIRE PART:
[PUBLISHER'S NOTE: For Federal Register Citations concerning Part 122 policy statements, see: *61 FR 41698,* Aug. 9, 1998.]

NOTES TO DECISIONS: COURT AND ADMINISTRATIVE DECISIONS SIGNIFICANTLY DISCUSSING SECTION --
United States v Hagberg (2000, CA9 Mont) 207 F3d 569, 2000 CDOS 2274, 2000 Daily Journal DAR 3083, 50 Envt Rep Cas 1380, 30 ELR 20436
Friends of Pinto Creek v United States EPA (2007, CA9) 504 F3d 1007, 65 Envt Rep Cas 1289
N. Cal. River Watch v City of Healdsburg (2004, ND Cal) 2004 US Dist LEXIS 1008, affd (2006, CA9 Cal) *457 F3d 1023, 62 Envt Rep Cas 2089, 36 ELR 20163* (criticized in *United States v Johnson (2006, CA1 Mass) 467 F3d 56, 63 Envt Rep Cas 1289, 36 ELR 20218)* and (criticized in *United States v Cundiff (2007, WD Ky) 480 F Supp 2d 940)* and (criticized in *United States v Fabian (2007, ND Ind) 2007 US Dist LEXIS 24254)* and op withdrawn, reh den, reh, en banc, den (2007, CA9 Cal) *2007 US App LEXIS 18612* and substituted op (2007, CA9 Cal) *2007 US App LEXIS 18615*

4338 words

TAB "27"

TITLE 40 -- PROTECTION OF ENVIRONMENT
CHAPTER I -- ENVIRONMENTAL PROTECTION AGENCY
SUBCHAPTER D -- WATER PROGRAMS
PART 122 -- EPA ADMINISTERED PERMIT PROGRAMS: THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
SUBPART B -- PERMIT APPLICATION AND SPECIAL NPDES PROGRAM REQUIREMENTS

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40 CFR 122.26

§ 122.26 Storm water discharges (applicable to State NPDES programs, see § 123.25).

(a) Permit requirement. (1) Prior to October 1, 1994, discharges composed entirely of storm water shall not be required to obtain a NPDES permit except:

(i) A discharge with respect to which a permit has been issued prior to February 4, 1987;

(ii) A discharge associated with industrial activity (see § 122.26(a)(4));

(iii) A discharge from a large municipal separate storm sewer system;

(iv) A discharge from a medium municipal separate storm sewer system;

(v) A discharge which the Director, or in States with approved NPDES programs, either the Director or the EPA Regional Administrator, determines to contribute to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States. This designation may include a discharge from any conveyance or system of conveyances used for collecting and conveying storm water runoff or a system of discharges from municipal separate storm sewers, except for those discharges from conveyances which do not require a permit under paragraph (a)(2) of this section or agricultural storm water runoff which is exempted from the definition of point source at § 122.2.

The Director may designate discharges from municipal separate storm sewers on a system-wide or jurisdiction-wide basis. In making this determination the Director may consider the following factors:

(A) The location of the discharge with respect to waters of the United States as defined at 40 CFR 122.2.

(B) The size of the discharge;

(C) The quantity and nature of the pollutants discharged to waters of the United States; and

(D) Other relevant factors.

(2) The Director may not require a permit for discharges of storm water runoff from the following:

(i) Mining operations composed entirely of flows which are from conveyances or systems of conveyances (including but not limited to pipes, conduits, ditches, and channels) used for collecting and conveying precipitation runoff and which are not contaminated by contact with or that have not come into contact with, any overburden, raw material, intermediate products, finished product, byproduct, or waste products located on the site of such operations, except in accordance with paragraph (c)(1)(iv) of this section.

(ii) All field activities or operations associated with oil and gas exploration, production, processing, or treatment operations or transmission facilities, including activities necessary to prepare a site for drilling and for the movement and placement of drilling equipment, whether or not such field activities or operations may be considered to be construction activities, except in accordance with paragraph (c)(1)(iii) of this section. Discharges of sediment from construction activities associated with oil and gas exploration, production, processing, or treatment operations or transmission facilities are not subject to the provisions of paragraph (c)(1)(iii)(C) of this section.

Note to paragraph (a)(2)(ii): EPA encourages operators of oil and gas field activities or operations to implement and maintain Best Management Practices (BMPs) to minimize discharges of pollutants, including sediment, in storm water both during and after construction activities to help ensure protection of surface water quality during storm events. Appropriate controls would be those suitable to the site conditions and consistent with generally accepted engineering design criteria and manufacturer specifications. Selection of BMPs could also be affected by seasonal or climate conditions.

(3) Large and medium municipal separate storm sewer systems. (i) Permits must be obtained for all discharges from large and medium municipal separate storm sewer systems.

(ii) The Director may either issue one system-wide permit covering all discharges from municipal separate storm sewers within a large or medium municipal storm sewer system or issue distinct permits for appropriate categories of discharges within a large or medium municipal separate storm sewer system including, but not limited to: all discharges owned or operated by the same municipality; located within the same jurisdiction; all discharges within a system that discharge to the same watershed; discharges within a system that are similar in nature; or for individual discharges from municipal separate storm sewers within the system.

(iii) The operator of a discharge from a municipal separate storm sewer which is part of a large or medium municipal separate storm sewer system must either:

(A) Participate in a permit application (to be a permittee or a co-permittee) with one or more other operators of discharges from the large or medium municipal storm sewer system which covers all, or a portion of all, discharges from the municipal separate storm sewer system;

(B) Submit a distinct permit application which only covers discharges from the municipal separate storm sewers for which the operator is responsible; or

(C) A regional authority may be responsible for submitting a permit application under the following guidelines:

(1) The regional authority together with co-applicants shall have authority over a storm water management program that is in existence, or shall be in existence at the time part 1 of the application is due;

(2) The permit applicant or co-applicants shall establish their ability to make a timely submission of part 1 and part 2 of the municipal application;

(3) Each of the operators of municipal separate storm sewers within the systems described in paragraphs (b)(4) (i), (ii), and (iii) or (b)(7) (i), (ii), and (iii) of this section, that are under the purview of the designated regional authority, shall comply with the application requirements of paragraph (d) of this section.

(iv) One permit application may be submitted for all or a portion of all municipal separate storm sewers within adjacent or interconnected large or medium municipal separate storm sewer systems. The Director may issue one system-wide permit covering all, or a portion of all municipal separate storm sewers in adjacent or interconnected large or medium municipal separate storm sewer systems.

(v) Permits for all or a portion of all discharges from large or medium municipal separate storm sewer systems that are issued on a system-wide, jurisdiction-wide, watershed or other basis may specify different conditions relating to different discharges covered by the permit, including different management programs for different drainage areas which contribute storm water to the system.

(vi) Co-permittees need only comply with permit conditions relating to discharges from the municipal separate storm sewers for which they are operators.

(4) Discharges through large and medium municipal separate storm sewer systems. In addition to meeting the requirements of paragraph (c) of this section, an operator of a storm water discharge associated with industrial activity which discharges through a large or medium municipal separate storm sewer system shall submit, to the operator of the municipal separate storm sewer system receiving the discharge no later than May 15, 1991, or 180 days prior to commencing such discharge:. the name of the facility; a contact person and phone number; the location of the discharge; a description, including Standard Industrial Classification, which best reflects the principal products or services provided by each facility; and any existing NPDES permit number.

(5) Other municipal separate storm sewers. The Director may issue permits for municipal separate storm sewers that are designated under paragraph (a)(1)(v) of this section on a system-wide basis, jurisdiction-wide basis, watershed basis or other appropriate basis, or may issue permits for individual discharges.

(6) Non-municipal separate storm sewers. For storm water discharges associated with industrial activity from point sources which discharge through a non-municipal or non-publicly owned separate storm sewer system, the Director, in his discretion, may issue: a single NPDES permit, with each discharger a co-permittee to a permit issued to the operator of the portion of the system that discharges into waters of the United States; or, individual permits to each discharger of storm water associated with industrial activity through the non-municipal conveyance system.

(i) All storm water discharges associated with industrial activity that discharge through a storm water discharge system that is not a municipal separate storm sewer must be covered by an individual permit, or a permit issued to the operator of the portion of the system that discharges to waters of the United States, with each discharger to the non-municipal conveyance a co-permittee to that permit.

(ii) Where there is more than one operator of a single system of such conveyances, all operators of storm water discharges associated with industrial activity must submit applications.

(iii) Any permit covering more than one operator shall identify the effluent limitations, or other permit conditions, if any, that apply to each operator.

(7) Combined sewer systems. Conveyances that discharge storm water runoff combined with municipal sewage are point sources that must obtain NPDES permits in accordance with the procedures of § 122.21 and are not subject to the provisions of this section.

(8) Whether a discharge from a municipal separate storm sewer is or is not subject to regulation under this section shall have no bearing on whether the owner or operator of the discharge is eligible for funding under title II, title III or title VI of the Clean Water Act. See 40 CFR part 35, subpart I, appendix A(b)H.2.j.

(9)(i) On and after October 1, 1994, for discharges composed entirely of storm water, that are not required by paragraph (a)(1) of this section to obtain a permit, operators shall be required to obtain a NPDES permit only if:

(A) The discharge is from a small MS4 required to be regulated pursuant to § 122.32;

(B) The discharge is a storm water discharge associated with small construction activity pursuant to paragraph (b)(15) of this section;

(C) The Director, or in States with approved NPDES programs either the Director or the EPA Regional Administrator, determines that storm water controls are needed for the discharge based on wasteload allocations that are part of "total maximum daily loads" (TMDLs) that address the pollutant(s) of concern; or

(D) The Director, or in States with approved NPDES programs either the Director or the EPA Regional Administrator, determines that the discharge, or category of discharges within a geographic area, contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States.

(ii) Operators of small MS4s designated pursuant to paragraphs (a)(9)(i)(A), (a)(9)(i)(C), and (a)(9)(i)(D) of this section shall seek coverage under an NPDES permit in accordance with §§ 122.33 through 122.35. Operators of non-municipal sources designated pursuant to paragraphs (a)(9)(i)(B), (a)(9)(i)(C), and (a)(9)(i)(D) of this section shall seek coverage under an NPDES permit in accordance with paragraph (c)(1) of this section.

(iii) Operators of storm water discharges designated pursuant to paragraphs (a)(9)(i)(C) and (a)(9)(i)(D) of this section shall apply to the Director for a permit within 180 days of receipt of notice, unless permission for a later date is granted by the Director (see § 124.52(c) of this chapter).

(b) Definitions. (1) Co-permittee means a permittee to a NPDES permit that is only responsible for permit conditions relating to the discharge for which it is operator.

(2) Illicit discharge means any discharge to a municipal separate storm sewer that is not composed entirely of storm water except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from fire fighting activities.

(3) Incorporated place means the District of Columbia, or a city, town, township, or village that is incorporated under the laws of the State in which it is located.

(4) Large municipal separate storm sewer system means all municipal separate storm sewers that are either:

(i) Located in an incorporated place with a population of 250,000 or more as determined by the 1990 Decennial Census by the Bureau of the Census (Appendix F of this part); or

(ii) Located in the counties listed in appendix H, except municipal separate storm sewers that are located in the incorporated places, townships or towns within such counties; or

(iii) Owned or operated by a municipality other than those described in paragraph (b)(4)(i) or (ii) of this section and that are designated by the Director as part of the large or medium municipal separate storm sewer system due to the interrelationship between the discharges of the designated storm sewer and the discharges from municipal separate storm sewers described under paragraph (b)(4)(i) or (ii) of this section. In making this determination the Director may consider the following factors:

(A) Physical interconnections between the municipal separate storm sewers;

(B) The location of discharges from the designated municipal separate storm sewer relative to discharges from municipal separate storm sewers described in paragraph (b)(4)(i) of this section;

(C) The quantity and nature of pollutants discharged to waters of the United States;

(D) The nature of the receiving waters; and

(E) Other relevant factors; or

(iv) The Director may, upon petition, designate as a large municipal separate storm sewer system, municipal separate storm sewers located within the boundaries of a region defined by a storm water management regional authority based on a jurisdictional, watershed, or other appropriate basis that includes one or more of the systems described in paragraph (b)(4)(i), (ii), (iii) of this section.

(5) Major municipal separate storm sewer outfall (or "major outfall") means a municipal separate storm sewer outfall that discharges from a single pipe with an inside diameter of 36 inches or more or its equivalent (discharge from a single conveyance other than circular pipe which is associated with a drainage area of more than 50 acres); or for municipal separate storm sewers that receive storm water from lands zoned for industrial activity (based on comprehensive zoning plans or the equivalent), an outfall that discharges from a single pipe with an inside diameter of 12 inches or more or from its equivalent (discharge from other than a circular pipe associated with a drainage area of 2 acres or more).

(6) Major outfall means a major municipal separate storm sewer outfall.

(7) Medium municipal separate storm sewer system means all municipal separate storm sewers that are either:

(i) Located in an incorporated place with a population of 100,000 or more but less than 250,000, as determined by the 1990 Decennial Census by the Bureau of the Census (Appendix G of this part); or

(ii) Located in the counties listed in appendix I, except municipal separate storm sewers that are located in the incorporated places, townships or towns within such counties; or

(iii) Owned or operated by a municipality other than those described in paragraph (b)(7)(i) or (ii) of this section and that are designated by the Director as part of the large or medium municipal separate storm sewer system due to the

interrelationship between the discharges of the designated storm sewer and the discharges from municipal separate storm sewers described under paragraph (b)(7)(i) or (ii) of this section. In making this determination the Director may consider the following factors:

(A) Physical interconnections between the municipal separate storm sewers;

(B) The location of discharges from the designated municipal separate storm sewer relative to discharges from municipal separate storm sewers described in paragraph (b)(7)(i) of this section;

(C) The quantity and nature of pollutants discharged to waters of the United States;

(D) The nature of the receiving waters; or

(E) Other relevant factors; or

(iv) The Director may, upon petition, designate as a medium municipal separate storm sewer system, municipal separate storm sewers located within the boundaries of a region defined by a storm water management regional authority based on a jurisdictional, watershed, or other appropriate basis that includes one or more of the systems described in paragraphs (b)(7)(i), (ii), (iii) of this section.

(8) Municipal separate storm sewer means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

(i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;

(ii) Designed or used for collecting or conveying storm water;

(iii) Which is not a combined sewer; and

(iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

(9) Outfall means a point source as defined by 40 CFR 122.2 at the point where a municipal separate storm sewer discharges to waters of the United States and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States.

(10) Overburden means any material of any nature, consolidated or unconsolidated, that overlies a mineral deposit, excluding topsoil or similar naturally-occurring surface materials that are not disturbed by mining operations.

(11) Runoff coefficient means the fraction of total rainfall that will appear at a conveyance as runoff.

(12) Significant materials includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under section 101(14) of CERCLA; any chemical the facility is required to report pursuant to section 313 of title III of SARA; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with storm water discharges.

(13) Storm water means storm water runoff, snow melt runoff, and surface runoff and drainage.

(14) Storm water discharge associated with industrial activity means the discharge from any conveyance that is used for collecting and conveying storm water and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the NPDES program under this part 122. For the categories of industries identified in this section, the term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters (as defined at part 401 of this chapter); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and final products; and areas where industrial activity has taken place in the

past and significant materials remain and are exposed to storm water. For the purposes of this paragraph, material handling activities include storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product, by-product or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas. Industrial facilities (including industrial facilities that are federally, State, or municipally owned or operated that meet the description of the facilities listed in paragraphs (b)(14)(i) through (xi) of this section) include those facilities designated under the provisions of paragraph (a)(1)(v) of this section. The following categories of facilities are considered to be engaging in "industrial activity" for purposes of paragraph (b)(14):

(i) Facilities subject to storm water effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards under 40 CFR subchapter N (except facilities with toxic pollutant effluent standards which are exempted under category (xi) in paragraph (b)(14) of this section);

(ii) Facilities classified as Standard Industrial Classifications 24 (except 2434), 26 (except 265 and 267), 28 (except 283), 29, 311, 32 (except 323), 33, 3441, 373;

(iii) Facilities classified as Standard Industrial Classifications 10 through 14 (mineral industry) including active or inactive mining operations (except for areas of coal mining operations no longer meeting the definition of a reclamation area under 40 CFR 434.11(1) because the performance bond issued to the facility by the appropriate SMCRA authority has been released, or except for areas of non-coal mining operations which have been released from applicable State or Federal reclamation requirements after December 17, 1990) and oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge storm water contaminated by contact with or that has come into contact with, any overburden, raw material, intermediate products, finished products, byproducts or waste products located on the site of such operations; (inactive mining operations are mining sites that are not being actively mined, but which have an identifiable owner/operator; inactive mining sites do not include sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined materials, nor sites where minimal activities are undertaken for the sole purpose of maintaining a mining claim);

(iv) Hazardous waste treatment, storage, or disposal facilities, including those that are operating under interim status or a permit under subtitle C of RCRA;

(v) Landfills, land application sites, and open dumps that receive or have received any industrial wastes (waste that is received from any of the facilities described under this subsection) including those that are subject to regulation under subtitle D of RCRA;

(vi) Facilities involved in the recycling of materials, including metal scrapyards, battery reclaimers, salvage yards, and automobile junkyards, including but limited to those classified as Standard Industrial Classification 5015 and 5093;

(vii) Steam electric power generating facilities, including coal handling sites;

(viii) Transportation facilities classified as Standard Industrial Classifications 40, 41, 42 (except 4221-25), 43, 44, 45, and 5171 which have vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. Only those portions of the facility that are either involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, airport deicing operations, or which are otherwise identified under paragraphs (b)(14) (i)-(vii) or (ix)-(xi) of this section are associated with industrial activity;

(ix) Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are located within the confines of the facility, with a design flow of 1.0 mgd or more, or required to have an approved pretreatment program under 40 CFR part 403. Not included are farm lands, domestic gardens or lands used for sludge management where sludge is beneficially reused and which are not physically located in the confines of the facility, or areas that are in compliance with section 405 of the CWA;

(x) Construction activity including clearing, grading and excavation, except operations that result in the disturbance of less than five acres of total land area. Construction activity also includes the disturbance of less than five acres of total land area that is a part of a larger common plan of development or sale if the larger common plan will ultimately disturb five acres or more;

(xi) Facilities under Standard Industrial Classifications 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 285, 30, 31 (except 311), 323, 34 (except 3441), 35, 36, 37 (except 373), 38, 39, and 4221-25;

(15) Storm water discharge associated with small construction activity means the discharge of storm water from:

(i) Construction activities including clearing, grading, and excavating that result in land disturbance of equal to or greater than one acre and less than five acres. Small construction activity also includes the disturbance of less than one acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than one and less than five acres. Small construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the facility. The Director may waive the otherwise applicable requirements in a general permit for a storm water discharge from construction activities that disturb less than five acres where:

(A) The value of the rainfall erosivity factor ("R" in the Revised Universal Soil Loss Equation) is less than five during the period of construction activity. The rainfall erosivity factor is determined in accordance with Chapter 2 of Agriculture Handbook Number 703, Predicting Soil Erosion by Water: A Guide to Conservation Planning With the Revised Universal Soil Loss Equation (RUSLE), pages 21-64, dated January 1997. The Director of the Federal Register approves this incorporation by reference in accordance with *5 U.S.C 552*(a) and 1 CFR part 51. Copies may be obtained from EPA's Water Resource Center, Mail Code RC4100, 1200 Pennsylvania Ave., NW., Washington, DC 20460. A copy is also available for inspection at the U.S. EPA Water Docket, 1200 Pennsylvania Ave., NW., Washington, DC 20460, or the Office of the Federal Register, 800 N. Capitol Street N.W. Suite 700, Washington, DC. An operator must certify to the Director that the construction activity will take place during a period when the value of the rainfall erosivity factor is less than five; or

(B) Storm water controls are not needed basedon a "total maximum daily load" (TMDL) approved or established by EPA that addresses the pollutant(s) of concern or, for non-impaired waters that do not require TMDLs, an equivalent analysis that determines allocations for small construction sites for the pollutant(s) of concern or that determines that such allocations are not needed to protect water quality based on consideration of existing in-stream concentrations, expected growth in pollutant contributions from all sources, and a margin of safety. For the purpose of this paragraph, the pollutant(s) of concern include sediment or a parameter that addresses sediment (such as total suspended solids, turbidity or siltation) and any other pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from the construction activity. The operator must certify to the Director that the construction activity will take place, and storm water discharges will occur, within the drainage area addressed by the TMDL or equivalent analysis.

(ii) Any other construction activity designated by the Director, or in States with approved NPDES programs either the Director or the EPA Regional Administrator, based on the potential for contribution to a violation of a water quality standard or for significant contribution of pollutants to waters of the United States.

EXHIBIT 1 TO § 122.26(b)(15).--SUMMARY OF COVERAGE
OF "STORM WATER DISCHARGES ASSICIATED WITH SMALL
CONSTRUCTION ACTIVITY" UNDER THE NPDES STORM WATER PROGRAM

Automatic Designation: Required Nationwide Coverage	. Construction activities that result in a land disturbance of equal to or greater than one acre and less than five acres. . Construction activities disturbing less than one acre if part of a larger common plan of development or sale with a planned disturbance of equal to or greater than one acre and less than five acres. (see § 122.26(b)(15)(i).)
Potential Designation: Optional Evaluation and Designation by the NPDES Permitting Authority or EPA Regional Administrator.	. Construction activities that result in a land disturbance of less than one acre based on the potential for contribution to a violation of a water quality standard or for significant contribution of pollutants. (see § 122.26(b)(15)(ii).)

EXHIBIT 1 TO § 122.26(b)(15).--SUMMARY OF COVERAGE
OF "STORM WATER DISCHARGES ASSICIATED WITH SMALL
CONSTRUCTION ACTIVITY" UNDER THE NPDES STORM WATER PROGRAM

Potential Waiver: Waiver from Requirements as Determined by the NPDES Permitting Authority.	Any automatically designated construction activity where the operator certifies: (1) A rainfall erosivity factor of less than five, or (2) That the activity will occur within an area where controls are not needed based on a TMDL or, for non-impaired waters that do not require a TMDL, an equivalent analysis for the pollutant(s) of concern. (see § 122.26(b)(15)(i).)

(16) Small municipal separate storm sewer system means all separate storm sewers that are:

(i) Owned or operated by the United States, a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States.

(ii) Not defined as "large" or "medium" municipal separate storm sewersystems pursuant to paragraphs (b)(4) and (b)(7) of this section, or designated under paragraph (a)(1)(v) of this section.

(iii) This term includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings.

(17) Small MS4 means a small municipal separate storm sewer system.

(18) Municipal separate storm sewer system means all separate storm sewers that are defined as "large" or "medium" or "small" municipal separate storm sewer systems pursuant to paragraphs (b)(4), (b)(7), and (b)(16) of this section, or designated under paragraph (a)(1)(v) of this section.

(19) MS4 means a municipal separate storm sewer system.

(20) Uncontrolled sanitary landfill means a landfill or open dump, whether in operation or closed, that does not meet the requirements for runon or runoff controls established pursuant to subtitle D of the Solid Waste Disposal Act.

(c) Application requirements for storm water discharges associated with industrial activity and storm water discharges associated with small construction activity -- (1) Individual application. Dischargers of storm water associated with industrial activity and with small construction activity are required to apply for an individual permit or seek coverage under a promulgated storm water general permit. Facilities that are required to obtain an individual permit, or any discharge of storm water which the Director is evaluating for designation (see 124.52(c) of this chapter) under paragraph (a)(1)(v) of this section and is not a municipal storm sewer, shall submit an NPDES application in accordance with the requirements of § 122.21 as modified and supplemented by the provisions of this paragraph.

(i) Except as provided in § 122.26(c)(1)(ii)-(iv), the operator of a storm water discharge associated with industrial activity subject to this section shall provide:

(A) A site map showing topography (or indicating the outline of drainage areas served by the outfall(s) covered in the application if a topographic map is unavailable) of the facility including: each of its drainage and discharge structures; the drainage area of each storm water outfall; paved areas and buildings within the drainage area of each storm water outfall, each past or present area used for outdoor storage or disposal of significant materials, each existing structural control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied, each of its hazardous waste treatment, storage or disposal facilities (including each area not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); each well where fluids from the facility are injected underground; springs, and other surface water bodies which receive storm water discharges from the facility;

(B) An estimate of the area of impervious surfaces (including paved areas and building roofs) and the total area drained by each outfall (within a mile radius of the facility) and a narrative description of the following: Significant materials that in the three years prior to the submittal of this application have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage or disposal of such materials; materials management practices employed, in the three years prior to the submittal of this application, to minimize contact by these materials with storm water runoff; materials loading and access areas; the location, manner and frequency in which pesticides, herbicides, soil conditioners and fertilizers are applied; the location and a description of existing structural and non-structural control measures to reduce pollutants in storm water runoff; and a description of the treatment the storm water receives, including the ultimate disposal of any solid or fluid wastes other than by discharge;

(C) A certification that all outfalls that should contain storm water discharges associated with industrial activity have been tested or evaluated for the presence of non-storm water discharges which are not covered by a NPDES permit; tests for such non-storm water discharges may include smoke tests, fluorometric dye tests, analysis of accurate schematics, as well as other appropriate tests. The certification shall include a description of the method used, the date of any testing, and the on-site drainage points that were directly observed during a test;

(D) Existing information regarding significant leaks or spills of toxic or hazardous pollutants at the facility that have taken place within the three years prior to the submittal of this application;

(E) Quantitative data based on samples collected during storm events and collected in accordance with § 122.21 of this part from all outfalls containing a storm water discharge associated with industrial activity for the following parameters:

(1) Any pollutant limited in an effluent guideline to which the facility is subject;

(2) Any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit);

(3) Oil and grease, pH, BOD5, COD, TSS, total phosphorus, total Kjeldahl nitrogen, and nitrate plus nitrite nitrogen;

(4) Any information on the discharge required under § 122.21(g)(7) (vi) and (vii);

(5) Flow measurements or estimates of the flow rate, and the total amount of discharge for the storm event(s) sampled, and the method of flow measurement or estimation; and

(6) The date and duration (in hours) of the storm event(s) sampled, rainfall measurements or estimates of the storm event (in inches) which generated the sampled runoff and the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event (in hours);

(F) Operators of a discharge which is composed entirely of storm water are exempt from the requirements of § 122.21 (g)(2), (g)(3), (g)(4), (g)(5), (g)(7)(iii), (g)(7)(iv), (g)(7)(v), and (g)(7)(viii); and

(G) Operators of new sources or new discharges (as defined in § 122.2 of this part) which are composed in part or entirely of storm water must include estimates for the pollutants or parameters listed in paragraph (c)(1)(i)(E) of this section instead of actual sampling data, along with the source of each estimate. Operators of new sources or new discharges composed in part or entirely of storm water must provide quantitative data for the parameters listed in paragraph (c)(1)(i)(E) of this section within two years after commencement of discharge, unless such data has already been reported under the monitoring requirements of the NPDES permit for the discharge. Operators of a new source or new discharge which is composed entirely of storm water are exempt from the requirements of § 122.21 (k)(3)(ii), (k)(3)(iii), and (k)(5).

(ii) An operator of an existing or new storm water discharge that is associated with industrial activity solely under paragraph (b)(14)(x) of this section or is associated with small construction activity solely under paragraph (b)(15) of this section, is exempt from the requirements of § 122.21(g) and paragraph (c)(1)(i) of this section. Such operator shall provide a narrative description of:

(A) The location (including a map) and the nature of the construction activity;

(B) The total area of the site and the area of the site that is expected to undergo excavation during the life of the permit;

(C) Proposed measures, including best management practices, to control pollutants in storm water discharges during construction, including a brief description of applicable State and local erosion and sediment control requirements;

(D) Proposed measures to control pollutants in storm water discharges that will occur after construction operations have been completed, including a brief description of applicable State or local erosion and sediment control requirements;

(E) An estimate of the runoff coefficient of the site and the increase in impervious area after the construction addressed in the permit application is completed, the nature of fill material and existing data describing the soil or the quality of the discharge; and

(F) The name of the receiving water.

(iii) The operator of an existing or new discharge composed entirely of storm water from an oil or gas exploration, production, processing, or treatment operation, or transmission facility is not required to submit a permit application in accordance with paragraph (c)(1)(i) of this section, unless the facility:

(A) Has had a discharge of storm water resulting in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 117.21 or 40 CFR 302.6 at anytime since November 16, 1987; or

(B) Has had a discharge of storm water resulting in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 110.6 at any time since November 16, 1987; or

(C) Contributes to a violation of a water quality standard.

(iv) The operator of an existing or new discharge composed entirely of storm water from a mining operation is not required to submit a permit application unless the discharge has come into contact with, any overburden, raw material, intermediate products, finished product, byproduct or waste products located on the site of such operations.

(v) Applicants shall provide such other information the Director may reasonably require under § 122.21(g)(13) of this part to determine whether to issue a permit and may require any facility subject to paragraph (c)(1)(ii) of this section to comply with paragraph (c)(1)(i) of this section.

(2) [Reserved]

(d) Application requirements for large and medium municipal separate storm sewer discharges. The operator of a discharge from a large or medium municipal separate storm sewer or a municipal separate storm sewer that is designated by the Director under paragraph (a)(1)(v) of this section, may submit a jurisdiction-wide or system-wide permit application. Where more than one public entity owns or operates a municipal separate storm sewer within a geographic area (including adjacent or interconnected municipal separate storm sewer systems), such operators may be a coapplicant to the same application. Permit applications for discharges from large and medium municipal storm sewers or municipal storm sewers designated under paragraph (a)(1)(v) of this section shall include;

(1) Part 1. Part 1 of the application shall consist of;

(i) General information. The applicants' name, address, telephone number of contact person, ownership status and status as a State or local government entity.

(ii) Legal authority. A description of existing legal authority to control discharges to the municipal separate storm sewer system. When existing legal authority is not sufficient to meet the criteria provided in paragraph (d)(2)(i) of this section, the description shall list additional authorities as will be necessary to meet the criteria and shall include a schedule and commitment to seek such additional authority that will be needed to meet the criteria.

(iii) Source identification. (A) A description of the historic use of ordinances, guidance or other controls which limited the discharge of non-storm water discharges to any Publicly Owned Treatment Works serving the same area as the municipal separate storm sewer system.

(B) A USGS 7.5 minute topographic map (or equivalent topographic map with a scale between 1:10,000 and 1:24,000 if cost effective) extending one mile beyond the service boundaries of the municipal storm sewer system covered by the permit application. The following information shall be provided:

(1) The location of known municipal storm sewer system outfalls discharging to waters of the United States;

(2) A description of the land use activities (e.g. divisions indicating undeveloped, residential, commercial, agricultural and industrial uses) accompanied with estimates of population densities and projected growth for a ten year period within the drainage area served by the separate storm sewer. For each land use type, an estimate of an average runoff coefficient shall be provided;

(3) The location and a description of the activities of the facility of each currently operating or closed municipal landfill or other treatment, storage or disposal facility for municipal waste;

(4) The location and the permit number of any known discharge to the municipal storm sewer that has been issued a NPDES permit;

(5) The location of major structural controls for storm water discharge (retention basins, detention basins, major infiltration devices, etc.); and

(6) The identification of publicly owned parks, recreational areas, and other open lands.

(iv) Discharge characterization. (A) Monthly mean rain and snow fall estimates (or summary of weather bureau data) and the monthly average number of storm events.

(B) Existing quantitative data describing the volume and quality of discharges from the municipal storm sewer, including a description of the outfalls sampled, sampling procedures and analytical methods used.

(C) A list of water bodies that receive discharges from the municipal separate storm sewer system, including downstream segments, lakes and estuaries, where pollutants from the system discharges may accumulate and cause water degradation and a brief description of known water quality impacts. At a minimum, the description of impacts shall include a description of whether the water bodies receiving such discharges have been:

(1) Assessed and reported in section 305(b) reports submitted by the State, the basis for the assessment (evaluated or monitored), a summary of designated use support and attainment of Clean Water Act (CWA) goals (fishable and swimmable waters), and causes of nonsupport of designated uses;

(2) Listed under section 304(l)(1)(A)(i), section 304(l)(1)(A)(ii), or section 304(l)(1)(B) of the CWA that is not expected to meet water quality standards or water quality goals;

(3) Listed in State Nonpoint Source Assessments required by section 319(a) of the CWA that, without additional action to control nonpoint sources of pollution, cannot reasonably be expected to attain or maintain water quality standards due to storm sewers, construction, highway maintenance and runoff from municipal landfills and municipal sludge adding significant pollution (or contributing to a violation of water quality standards);

(4) Identified and classified according to eutrophic condition of publicly owned lakes listed in State reports required under section 314(a) of the CWA (include the following: A description of those publicly owned lakes for which uses are known to be impaired; a description of procedures, processes and methods to control the discharge of pollutants from municipal separate storm sewers into such lakes; and a description of methods and procedures to restore the quality of such lakes);

(5) Areas of concern of the Great Lakes identified by the International Joint Commission;

(6) Designated estuaries under the National Estuary Program under section 320 of the CWA;

(7) Recognized by the applicant as highly valued or sensitive waters;

(8) Defined by the State or U.S. Fish and Wildlife Services's National Wetlands Inventory as wetlands; and

(9) Found to have pollutants in bottom sediments, fish tissue or biosurvey data.

(D) Field screening. Results of a field screening analysis for illicit connections and illegal dumping for either selected field screening points or major outfalls covered in the permit application. At a minimum, a screening analysis shall include a narrative description, for either each field screening point or major outfall, of visual observations made during dry weather periods. If any flow is observed, two grab samples shall be collected during a 24 hour period with a minimum period of four hours between samples. For all such samples, a narrative description of the color, odor, turbidity, the presence of an oil sheen or surface scum as well as any other relevant observations regarding the potential presence of non-storm water discharges or illegal dumping shall be provided. In addition, a narrative description of the results of a field analysis using suitable methods to estimate pH, total chlorine, total copper, total phenol, and detergents

(or surfactants) shall be provided along with a description of the flow rate. Where the field analysis does not involve analytical methods approved under 40 CFR part 136, the applicant shall provide a description of the method used including the name of the manufacturer of the test method along with the range and accuracy of the test. Field screening points shall be either major outfalls or other outfall points (or any other point of access such as manholes) randomly located throughout the storm sewer system by placing a grid over a drainage system map and identifying those cells of the grid which contain a segment of the storm sewer system or major outfall. The field screening points shall be established using the following guidelines and criteria:

(1) A grid system consisting of perpendicular north-south and east-west lines spaced 1/4 mile apart shall be overlaid on a map of the municipal storm sewer system, creating a series of cells;

(2) All cells that contain a segment of the storm sewer system shall be identified; one field screening point shall be selected in each cell; major outfalls may be used as field screening points;

(3) Field screening points should be located downstream of any sources of suspected illegal or illicit activity;

(4) Field screening points shall be located to the degree practicable at the farthest manhole or other accessible location downstream in the system, within each cell; however, safety of personnel and accessibility of the location should be considered in making this determination;

(5) Hydrological conditions; total drainage area of the site; population density of the site; traffic density; age of the structures or buildings in the area; history of the area; and land use types;

(6) For medium municipal separate storm sewer systems, no more than 250 cells need to have identified field screening points; in large municipal separate storm sewer systems, no more than 500 cells need to have identified field screening points; cells established by the grid that contain no storm sewer segments will be eliminated from consideration; if fewer than 250 cells in medium municipal sewers are created, and fewer than 500 in large systems are created by the overlay on the municipal sewer map, then all those cells which contain a segment of the sewer system shall be subject to field screening (unless access to the separate storm sewer system is impossible); and

(7) Large or medium municipal separate storm sewer systems which are unable to utilize the procedures described in paragraphs (d)(1)(iv)(D) (1) through (6) of this section, because a sufficiently detailed map of the separate storm sewer systems is unavailable, shall field screen no more than 500 or 250 major outfalls respectively (or all major outfalls in the system, if less); in such circumstances, the applicant shall establish a grid system consisting of north-south and east-west lines spaced 1/4 mile apart as an overlay to the boundaries of the municipal storm sewer system, thereby creating a series of cells; the applicant will then select major outfalls in as many cells as possible until at least 500 major outfalls (large municipalities) or 250 major outfalls (medium municipalities) are selected; a field screening analysis shall be undertaken at these major outfalls.

(E) Characterization plan. Information and a proposed program to meet the requirements of paragraph (d)(2)(iii) of this section. Such description shall include: the location of outfalls or field screening points appropriate for representative data collection under paragraph (d)(2)(iii)(A) of this section, a description of why the outfall or field screening point is representative, the seasons during which sampling is intended, a description of the sampling equipment. The proposed location of outfalls or field screening points for such sampling should reflect water quality concerns (see paragraph (d)(1)(iv)(C) of this section) to the extent practicable.

(v) Management programs. (A) A description of the existing management programs to control pollutants from the municipal separate storm sewer system. The description shall provide information on existing structural and source controls, including operation and maintenance measures for structural controls, that are currently being implemented. Such controls may include, but are not limited to: Procedures to control pollution resulting from construction activities; floodplain management controls; wetland protection measures; best management practices for new subdivisions; and emergency spill response programs. The description may address controls established under State law as well as local requirements.

(B) A description of the existing program to identify illicit connections to the municipal storm sewer system. The description should include inspection procedures and methods for detecting and preventing illicit discharges, and describe areas where this program has been implemented.

(vi) Fiscal resources. (A) A description of the financial resources currently available to the municipality to complete part 2 of the permit application. A description of the municipality's budget for existing storm water programs, in-

cluding an overview of the municipality's financial resources and budget, including overall indebtedness and assets, and sources of funds for storm water programs.

(2) Part 2. Part 2 of the application shall consist of:

(i) Adequate legal authority. A demonstration that the applicant can operate pursuant to legal authority established by statute, ordinance or series of contracts which authorizes or enables the applicant at a minimum to:

(A) Control through ordinance, permit, contract, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from sites of industrial activity;

(B) Prohibit through ordinance, order or similar means, illicit discharges to the municipal separate storm sewer;

(C) Control through ordinance, order or similar means the discharge to a municipal separate storm sewer of spills, dumping or disposal of materials other than storm water;

(D) Control through interagency agreements among coapplicants the contribution of pollutants from one portion of the municipal system to another portion of the municipal system;

(E) Require compliance with conditions in ordinances, permits, contracts or orders; and

(F) Carry out all inspection, surveillance and monitoring procedures necessary to determine compliance and noncompliance with permit conditions including the prohibition on illicit discharges to the municipal separate storm sewer.

(ii) Source identification. The location of any major outfall that discharges to waters of the United States that was not reported under paragraph (d)(1)(iii)(B)(1) of this section. Provide an inventory, organized by watershed of the name and address, and a description (such as SIC codes) which best reflects the principal products or services provided by each facility which may discharge, to the municipal separate storm sewer, storm water associated with industrial activity;

(iii) Characterization data. When "quantitative data" for a pollutant are required under paragraph (d)(2)(iii)(A)(3) of this section, the applicant must collect a sample of effluent in accordance with § 122.21(g)(7) and analyze it for the pollutant in accordance with analytical methods approved under part 136 of this chapter. When no analytical method is approved the applicant may use any suitable method but must provide a description of the method. The applicant must provide information characterizing the quality and quantity of discharges covered in the permit application, including:

(A) Quantitative data from representative outfalls designated by the Director (based on information received in part 1 of the application, the Director shall designate between five and ten outfalls or field screening points as representative of the commercial, residential and industrial land use activities of the drainage area contributing to the system or, where there are less than five outfalls covered in the application, the Director shall designate all outfalls) developed as follows:

(1) For each outfall or field screening point designated under this subparagraph, samples shall be collected of stormwater discharges from three storm events occurring at least one month apart in accordance with the requirements at § 122.21(g)(7) (the Director may allow exemptions to sampling three storm events when climatic conditions create good cause for such exemptions);

(2) A narrative description shall be provided of the date and duration of the storm event(s) sampled, rainfall estimates of the storm event which generated the sampled discharge and the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event;

(3) For samples collected and described under paragraphs (d)(2)(iii) (A)(1) and (A)(2) of this section, quantitative data shall be provided for: the organic pollutants listed in Table II; the pollutants listed in Table III (toxic metals, cyanide, and total phenols) of appendix D of 40 CFR part 122, and for the following pollutants:

Total suspended solids (TSS)

Total dissolved solids (TDS)

COD

BOD[5]

Oil and grease

Fecal coliform

Fecal streptococcus

pH

Total Kjeldahl nitrogen

Nitrate plus nitrite

Dissolved phosphorus

Total ammonia plus organic nitrogen

Total phosphorus

(4) Additional limited quantitative data required by the Director for determining permit conditions (the Director may require that quantitative data shall be provided for additional parameters, and may establish sampling conditions such as the location, season of sample collection, form of precipitation (snow melt, rainfall) and other parameters necessary to insure representativeness);

(B) Estimates of the annual pollutant load of the cumulative discharges to waters of the United States from all identified municipal outfalls and the event mean concentration of the cumulative discharges to waters of the United States from all identified municipal outfalls during a storm event (as described under § 122.21(c)(7)) for BOD[sub]5, COD, TSS, dissolved solids, total nitrogen, total ammonia plus organic nitrogen, total phosphorus, dissolved phosphorus, cadmium, copper, lead, and zinc. Estimates shall be accompanied by a description of the procedures for estimating constituent loads and concentrations, including any modelling, data analysis, and calculation methods;

(C) A proposed schedule to provide estimates for each major outfall identified in either paragraph (d)(2)(ii) or (d)(1)(iii)(B)(1) of this section of the seasonal pollutant load and of the event mean concentration of a representative storm for any constituent detected in any sample required under paragraph (d)(2)(iii)(A) of this section; and

(D) A proposed monitoring program for representative data collection for the term of the permit that describes the location of outfalls or field screening points to be sampled (or the location of instream stations), why the location is representative, the frequency of sampling, parameters to be sampled, and a description of sampling equipment.

(iv) Proposed management program. A proposed management program covers the duration of the permit. It shall include a comprehensive planning process which involves public participation and where necessary intergovernmental coordination, to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate. The program shall also include a description of staff and equipment available to implement the program. Separate proposed programs may be submitted by each coapplicant. Proposed programs may impose controls on a systemwide basis, a watershed basis, a jurisdiction basis, or on individual outfalls. Proposed programs will be considered by the Director when developing permit conditions to reduce pollutants in discharges to the maximum extent practicable. Proposed management programs shall describe priorities for implementing controls. Such programs shall be based on:

(A) A description of structural and source control measures to reduce pollutants from runoff from commercial and residential areas that are discharged from the municipal storm sewer system that are to be implemented during the life of the permit, accompanied with an estimate of the expected reduction of pollutant loads and a proposed schedule for implementing such controls. At a minimum, the description shall include:

(1) A description of maintenance activities and a maintenance schedule for structural controls to reduce pollutants (including floatables) in discharges from municipal separate storm sewers;

(2) A description of planning procedures including a comprehensive master plan to develop, implement and enforce controls to reduce the discharge of pollutants from municipal separate storm sewers which receive discharges from areas of new development and significant redevelopment. Such plan shall address controls to reduce pollutants in discharges from municipal separate storm sewers after construction is completed. (Controls to reduce pollutants in discharges from municipal separate storm sewers containing construction site runoff are addressed in paragraph (d)(2)(iv)(D) of this section;

(3) A description of practices for operating and maintaining public streets, roads and highways and procedures for reducing the impact on receiving waters of discharges from municipal storm sewer systems, including pollutants discharged as a result of deicing activities;

(4) A description of procedures to assure that flood management projects assess the impacts on the water quality of receiving water bodies and that existing structural flood control devices have been evaluated to determine if retrofitting the device to provide additional pollutant removal from storm water is feasible;

(5) A description of a program to monitor pollutants in runoff from operating or closed municipal landfills or other treatment, storage or disposal facilities for municipal waste, which shall identify priorities and procedures for inspections and establishing and implementing control measures for such discharges (this program can be coordinated with the program developed under paragraph (d)(2)(iv)(C) of this section); and

(6) A description of a program to reduce to the maximum extent practicable, pollutants in discharges from municipal separate storm sewers associated with the application of pesticides, herbicides and fertilizer which will include, as appropriate, controls such as educational activities, permits, certifications and other measures for commercial applicators and distributors, and controls for application in public right-of-ways and at municipal facilities.

(B) A description of a program, including a schedule, to detect and remove (or require the discharger to the municipal separate storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer. The proposed program shall include:

(1) A description of a program, including inspections, to implement and enforce an ordinance, orders or similar means to prevent illicit discharges to the municipal separate storm sewer system; this programdescription shall address all types of illicit discharges, however the following category of non-storm water discharges or flows shall be addressed where such discharges are identified by the municipality as sources of pollutants to waters of the United States: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)) to separate storm sewers, uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, and street wash water (program descriptions shall address discharges or flows from fire fighting only where such discharges or flows are identified as significant sources of pollutants to waters of the United States);

(2) A description of procedures to conduct on-going field screening activities during the life of the permit, including areas or locations that will be evaluated by such field screens;

(3) A description of procedures to be followed to investigate portions of the separate storm sewer system that, based on the results of the field screen, or other appropriate information, indicate a reasonable potential of containing illicit discharges or other sources of non-storm water (such procedures may include: sampling procedures for constituents such as fecal coliform, fecal streptococcus, surfactants (MBAS), residual chlorine, fluorides and potassium; testing with fluorometric dyes; or conducting in storm sewer inspections where safety and other considerations allow. Such description shall include the location of storm sewers that have been identified for such evaluation);

(4) A description of procedures to prevent, contain, and respond to spills that may discharge into the municipal separate storm sewer;

(5) A description of a program to promote, publicize, and facilitate public reporting of the presence of illicit discharges or water quality impacts associated with discharges from municipal separate storm sewers;

(6) A description of educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials; and

(7) A description of controls to limit infiltration of seepage from municipal sanitary sewers to municipal separate storm sewer systems where necessary;

(C) A description of a program to monitor and control pollutants in storm water discharges to municipal systems from municipal landfills, hazardous waste treatment, disposal and recovery facilities, industrial facilities that are subject to section 313 of title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA), and industrial facilities that the municipal permit applicant determines are contributing a substantial pollutant loading to the municipal storm sewer system. The program shall:

(1) Identify priorities and procedures for inspections and establishing and implementing control measures for such discharges;

(2) Describe a monitoring program for storm water discharges associated with the industrial facilities identified in paragraph (d)(2)(iv)(C) of this section, to be implemented during the term of the permit, including the submission of quantitative data on the following constituents: Any pollutants limited in effluent guidelines subcategories, where applicable; any pollutant listed in an existing NPDES permit for a facility; oil and grease, COD, pH, BOD5, TSS, total phosphorus, total Kjeldahl nitrogen, nitrate plus nitrite nitrogen, and any information on discharges required under § 122.21(g)(7) (vi) and (vii).

(D) A description of a program to implement and maintain structural and non-structural best management practices to reduce pollutants in storm water runoff from construction sites to the municipal storm sewer system, which shall include:

(1) A description of procedures for site planning which incorporate consideration of potential water quality impacts;

(2) A description of requirements for nonstructural and structural best management practices;

(3) A description of procedures for identifying priorities for inspecting sites and enforcing control measures which consider the nature of the construction activity, topography, and the characteristics of soils and receiving water quality; and

(4) A description of appropriate educational and training measures for construction site operators.

(v) Assessment of controls. Estimated reductions in loadings of pollutants from discharges of municipal storm sewer constituents from municipal storm sewer systems expected as the result of the municipal storm water quality management program. The assessment shall also identify known impacts of storm water controls on ground water.

(vi) Fiscal analysis. For each fiscal year to be covered by the permit, a fiscal analysis of the necessary capital and operation and maintenance expenditures necessary to accomplish the activities of the programs under paragraphs (d)(2)(iii) and (iv) of this section. Such analysis shall include a description of the source of funds that are proposed to meet the necessary expenditures, including legal restrictions on the use of such funds.

(vii) Where more than one legal entity submits an application, the application shall contain a description of the roles and responsibilities of each legal entity and procedures to ensure effective coordination.

(viii) Where requirements under paragraph (d)(1)(iv)(E), (d)(2)(ii), (d)(2)(iii)(B) and (d)(2)(iv) of this section are not practicable or are not applicable, the Director may exclude any operator of a discharge from a municipal separate storm sewer which is designated under paragraph (a)(1)(v), (b)(4)(ii) or (b)(7)(ii) of this section from such requirements. The Director shall not exclude the operator of a discharge from a municipal separate storm sewer identified in appendix F, G, H or I of part 122, from any of the permit application requirements under this paragraph except where authorized under this section.

(e) Application deadlines. Any operator of a point source required to obtain a permit under this section that does not have an effective NPDES permit authorizing discharges from its storm water outfalls shall submit an application in accordance with the following deadlines:

(1) Storm water discharges associated with industrial activity. (i) Except as provided in paragraph (e)(1)(ii) of this section, for any storm water discharge associated with industrial activity identified in paragraphs (b)(14)(i) through (xi) of this section, that is not part of a group application as described in paragraph (c)(2) of this section or that is not authorized by a storm water general permit, a permit application made pursuant to paragraph (c) of this section must be submitted to the Director by October 1, 1992;

(ii) For any storm water discharge associated with industrial activity from a facility that is owned or operated by a municipality with a population of less than 100,000 that is not authorized by a general or individual permit, other than an airport, powerplant, or uncontrolled sanitary landfill, the permit application must be submitted to the Director by March 10, 2003.

(2) For any group application submitted in accordance with paragraph (c)(2) of this section:

(i) Part 1. (A) Except as provided in paragraph (e)(2)(i)(B) of this section, part 1 of the application shall be submitted to the Director, Office of Wastewater Enforcement and Compliance by September 30, 1991;

(B) Any municipality with a population of less than 250,000 shall not be required to submit a part 1 application before May 18, 1992.

(C) For any storm water discharge associated with industrial activity from a facility that is owned or operated by a municipality with a population of less than 100,000 other than an airport, powerplant, or uncontrolled sanitary landfill, permit applications requirements are reserved.

(ii) Based on information in the part 1 application, the Director will approve or deny the members in the group application within 60 days after receiving part 1 of the group application.

(iii) Part 2. (A) Except as provided in paragraph (e)(2)(iii)(B) of this section, part 2 of the application shall be submittted to the Director, Office of Wastewater Enforcement and Compliance by October 1, 1992;

(B) Any municipality with a population of less than 250,000 shall not be required to submit a part 1 application before May 17, 1993.

(C) For any storm water discharge associated with industrial activity from a facility that is owned or operated by a municipality with a population of less than 100,000 other than an airport, powerplant, or uncontrolled sanitary landfill, permit applications requirements are reserved.

(iv) Rejected facilities. (A) Except as provided in paragraph (e)(2)(iv)(B) of this section, facilities that are rejected as members of the group shall submit an individual application (or obtain coverage under an applicable general permit) no later than 12 months after the date of receipt of the notice of rejection or October 1, 1992, whichever comes first.

(B) Facilities that are owned or operated by a municipality and that are rejected as members of part 1 group application shall submit an individual application no later than 180 days after the date of receipt of the notice of rejection or October 1, 1992, whichever is later.

(v) A facility listed under paragraph (b)(14) (i)-(xi) of this section may add on to a group application submitted in accordance with paragraph (e)(2)(i) of this section at the discretion of the Office of Water Enforcement and Permits, and only upon a showing of good cause by the facility and the group applicant; the request for the addition of the facility shall be made no later than February 18, 1992; the addition of the facility shall not cause the percentage of the facilities that are required to submit quantitative data to be less than 10%, unless there are over 100 facilities in the group that are submitting quantitative data; approval to become part of group application must be obtained from the group or the trade association representing the individual facilities.

(3) For any discharge from a large municipal separate storm sewer system;

(i) Part 1 of the application shall be submitted to the Director by November 18, 1991;

(ii) Based on information received in the part 1 application the Director will approve or deny a sampling plan under paragraph (d)(1)(iv)(E) of this section within 90 days after receiving the part 1 application;

(iii) Part 2 of the application shall be submitted to the Director by November 16, 1992.

(4) For any discharge from a medium municipal separate storm sewer system;

(i) Part 1 of the application shall be submitted to the Director by May 18, 1992.

(ii) Based on information received in the part 1 application the Director will approve or deny a sampling plan under paragraph (d)(1)(iv)(E) of this section within 90 days after receiving the part 1 application.

(iii) Part 2 of the application shall be submitted to the Director by May 17, 1993.

(5) A permit application shall be submitted to the Director within 180 days of notice, unless permission for a later date is granted by the Director (see § 124.52(c) of this chapter), for:

(i) A storm water discharge that the Director, or in States with approved NPDES programs, either the Director or the EPA Regional Administrator, determines that the discharge contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States (see paragraphs (a)(1)(v) and (b)(15)(ii) of this section);

(ii) A storm water discharge subject to paragraph (c)(1)(v) of this section.

(6) Facilities with existing NPDES permits for storm water discharges associated with industrial activity shall maintain existing permits. Facilities with permits for storm water discharges associated with industrial activity which expire on or after May 18, 1992 shall submit a new application in accordance with the requirements of 40 CFR 122.21 and 40 CFR 122.26(c) (Form 1, Form 2F, and other applicable Forms) 180 days before the expiration of such permits.

(7) The Director shall issue or deny permits for discharges composed entirely of storm water under this section in accordance with the following schedule:

(i)(A) Except as provided in paragraph (e)(7)(i)(B) of this section, the Director shall issue or deny permits for storm water discharges associated with industrial activity no later than October 1, 1993, or, for new sources or existing sources which fail to submit a complete permit application by October 1, 1992, one year after receipt of a complete permit application;

(B) For any municipality with a population of less than 250,000 which submits a timely Part I group application under paragraph (e)(2)(i)(B) of this section, the Director shall issue or deny permits for storm water discharges associated with industrial activity no later than May 17, 1994, or, for any such municipality which fails to submit a complete Part II group permit application by May 17, 1993, one year after receipt of a complete permit application;

(ii) The Director shall issue or deny permits for large municipal separate storm sewer systems no later than November 16, 1993, or, for new sources or existing sources which fail to submit a complete permit application by November 16, 1992, one year after receipt of a complete permit application;

(iii) The Director shall issue or deny permits for medium municipal separate storm sewer systems no later than May 17, 1994, or, for new sources or existing sources which fail to submit a complete permit application by May 17, 1993, one year after receipt of a complete permit application.

(8) For any storm water discharge associated with small construction activities identified in paragraph (b)(15)(i) of this section, see § 122.21(c)(1). Discharges from these sources require permit authorization by March 10, 2003, unless designated for coverage before then.

(9) For any discharge from a regulated small MS4, the permit application made under § 122.33 must be submitted to the Director by:

(i) March 10, 2003 if designated under § 122.32(a)(1) unless your MS4 serves a jurisdiction with a population under 10,000 and the NPDES permitting authority has established a phasing schedule under § 123.35(d)(3) (see § 122.33(c)(1)); or

(ii) Within 180 days of notice, unless the NPDES permitting authority grants a later date, if designated under § 122.32(a)(2) (see § 122.33(c)(2)).

(f) Petitions. (1) Any operator of a municipal separate storm sewer system may petition the Director to require a separate NPDES permit (or a permit issued under an approved NPDES State program) for any discharge into the municipal separate storm sewer system.

(2) Any person may petition the Director to require a NPDES permit for a discharge which is composed entirely of storm water which contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States.

(3) The owner or operator of a municipal separate storm sewer system may petition the Director to reduce the Census estimates of the population served by such separate system to account for storm water discharged to combined sewers as defined by 40 CFR 35.2005(b)(11) that is treated in a publicly owned treatment works. In municipalities in which combined sewers are operated, the Census estimates of population may be reduced proportional to the fraction, based on estimated lengths, of the length of combined sewers over the sum of the length of combined sewers and municipal separate storm sewers where an applicant has submitted the NPDES permit number associated with each discharge point and a map indicating areas served by combined sewers and the location of any combined sewer overflow discharge point.

(4) Any person may petition the Director for the designation of a large, medium, or small municipal separate storm sewer system as defined by paragraph (b)(4)(iv), (b)(7)(iv), or (b)(16) of this section.

(5) The Director shall make a final determination on any petition received under this section within 90 days after receiving the petition with the exception of petitions to designate a small MS4 in which case the Director shall make a final determination on the petition within 180 days after its receipt.

(g) Conditional exclusion for "no exposure" of industrial activities and materials to storm water. Discharges composed entirely of storm water are not storm water discharges associated with industrial activity if there is "no exposure" of industrial materials and activities to rain, snow, snowmelt and/or runoff, and the discharger satisfies the conditions in paragraphs (g)(1) through (g)(4) of this section. "No exposure" means that all industrial materials and activities are protected by a storm resistant shelter to prevent exposure to rain, snow, snowmelt, and/or runoff. Industrial materials or activities include, but are not limited to, material handling equipment or activities, industrial machinery, raw materials, intermediate products, by-products, final products, or waste products. Material handling activities include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product or waste product.

(1) Qualification. To qualify for this exclusion, the operator of the discharge must:

(i) Provide a storm resistant shelter to protect industrial materials and activities from exposure to rain, snow, snow melt, and runoff;

(ii) Complete and sign (according to § 122.22) a certification that there are no discharges of storm water contaminated by exposure to industrial materials and activities from the entire facility, except as provided in paragraph (g)(2) of this section;

(iii) Submit the signed certification to the NPDES permitting authority once every five years;

(iv) Allow the Director to inspect the facility to determine compliance with the "no exposure" conditions;

(v) Allow the Director to make any "no exposure" inspection reports available to the public upon request; and

(vi) For facilities that discharge through an MS4, upon request, submit a copy of the certification of "no exposure" to the MS4 operator, as well as allow inspection and public reporting by the MS4 operator.

(2) Industrial materials and activities not requiring storm resistant shelter. To qualify for this exclusion, storm resistant shelter is not required for:

(i) Drums, barrels, tanks, and similar containers that are tightly sealed, provided those containers are not deteriorated and do not leak ("Sealed" means banded or otherwise secured and without operational taps or valves);

(ii) Adequately maintained vehicles used in material handling; and

(iii) Final products, other than products that would be mobilized in storm water discharge (e.g., rock salt).

(3) Limitations. (i) Storm water discharges from construction activities identified in paragraphs (b)(14)(x) and (b)(15) are not eligible for this conditional exclusion.

(ii) This conditional exclusion from the requirement for an NPDES permit is available on a facility-wide basis only, not for individual outfalls. If a facility has some discharges of storm water that would otherwise be "no exposure" discharges, individual permit requirements should be adjusted accordingly.

(iii) If circumstances change and industrial materials or activities become exposed to rain, snow, snow melt, and/or runoff, the conditions for this exclusion no longer apply. In such cases, the discharge becomes subject to enforcement for un-permitted discharge. Any conditionally exempt discharger who anticipates changes in circumstances should apply for and obtain permit authorization prior to the change of circumstances.

(iv) Notwithstanding the provisions of this paragraph, the NPDES permitting authority retains the authority to require permit authorization (and deny this exclusion) upon making a determination that the discharge causes, has a reasonable potential to cause, or contributes to an instream excursion above an applicable water quality standard, including designated uses.

(4) Certification. The no exposure certification must require the submission of the following information, at a minimum, to aid the NPDES permitting authority in determining if the facility qualifies for the no exposure exclusion:

(i) The legal name, address and phone number of the discharger (see § 122.21(b));

(ii) The facility name and address, the county name and the latitude and longitude where the facility is located;

(iii) The certification must indicate that none of the following materials or activities are, or will be in the foreseeable future, exposed to precipitation:

(A) Using, storing or cleaning industrial machinery or equipment, and areas where residuals from using, storing or cleaning industrial machinery or equipment remain and are exposed to storm water;

(B) Materials or residuals on the ground or in storm water inlets from spills/leaks;

(C) Materials or products from past industrial activity;

(D) Material handling equipment (except adequately maintained vehicles);

(E) Materials or products during loading/unloading or transporting activities;

(F) Materials or products stored outdoors (except final products intended for outside use, e.g., new cars, where exposure to storm water does not result in the discharge of pollutants);

(G) Materials contained in open, deteriorated or leaking storage drums, barrels, tanks, and similar containers;

(H) Materials or products handled/stored on roads or railways owned or maintained by the discharger;

(I) Waste material (except waste in covered, non-leaking containers, e.g., dumpsters);

(J) Application or disposal of process wastewater (unless otherwise permitted); and

(K) Particulate matter or visible deposits of residuals from roof stacks/vents not otherwise regulated, i.e., under an air quality control permit, and evident in the storm water outflow;

(iv) All "no exposure" certifications must include the following certification statement, and be signed in accordance with the signatory requirements of § 122.22: "I certify under penalty of law that I have read and understand the eligibility requirements for claiming a condition of "no exposure" and obtaining an exclusion from NPDES storm water permitting; and that there are no discharges of storm water contaminated by exposure to industrial activities or materials from the industrial facility identified in this document (except as allowed under paragraph (g)(2)) of this section. I understand that I am obligated to submit a no exposure certification form once every five years to the NPDES permitting authority and, if requested, to the operator of the local MS4 into which this facility discharges (where applicable). I understand that I must allow the NPDES permitting authority, or MS4 operator where the discharge is into the local MS4, to perform inspections to confirm the condition of no exposure and to make such inspection reports publicly available upon request. I understand that I must obtain coverage under an NPDES permit prior to any point source discharge of storm water from the facility. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly involved in gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

HISTORY: *[55 FR 48063,* Nov. 16, 1990, as amended at *56 FR 12100,* Mar. 21, 1991; *56 FR 56554,* Nov. 5, 1991; *57 FR 11412,* Apr. 2, 1992; *57 FR 60447,* Dec. 18, 1992; *60 FR 40235,* Aug. 7, 1995; *64 FR 68722, 68838,* Dec. 8, 1999; *65 FR 30886, 30907,* May 15, 2000; *68 FR 11325, 11329,* Mar. 10, 2003; *70 FR 11560, 11563,* Mar. 9, 2005; *71 FR 33628, 33639,* June 12, 2006]

AUTHORITY: The Clean Water Act, *33 U.S.C. 1251* et seq.

NOTES: [EFFECTIVE DATE NOTE: *71 FR 33628, 33639,* June 12, 2006, revised paragraphs (a)(2) and (e)(8), effective June 12, 2006.]

NOTES APPLICABLE TO ENTIRE CHAPTER:
[PUBLISHER'S NOTE: Nomenclature changes to Chapter I appear at *65 FR 47323, 47324, 47325,* Aug. 2, 2000.]

[PUBLISHER'S NOTE: For Federal Register citations concerning Chapter 1 Notice of implementation policy, see: *71 FR 25504,* May 1, 2006.]
[PUBLISHER'S NOTE: For Federal Register citations concerning Chapter 1 Findings, see: *74 FR 66496,* Dec. 15, 2009.]

NOTES APPLICABLE TO ENTIRE PART:
[PUBLISHER'S NOTE: For Federal Register Citations concerning Part 122 policy statements, see: *61 FR 41698,* Aug. 9, 1998.]

NOTES TO DECISIONS: COURT AND ADMINISTRATIVE DECISIONS SIGNIFICANTLY DISCUSSING SECTION --
American Mining Congress v United States EPA (1992, CA9) 965 F2d 759, 92 CDOS 4465, 92 Daily Journal DAR 7079, 35 Envt Rep Cas 1032, 22 ELR 21135, 121 OGR 375
Envtl. Def. Ctr., Inc. v EPA (2003, CA9 Cal) 344 F3d 832, 57 Envt Rep Cas 1039, 33 ELR 20269, cert den *(2004) 541 US 1085, 124 S Ct 2811, 159 L Ed 2d 246, 59 Envt Rep Cas 1160*

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TAB "28"

40 CFR 122.44

§ 122.44 Establishing limitations, standards, and other permit conditions (applicable to State NPDES programs, see § 123.25).

In addition to the conditions established under § 122.43(a), each NPDES permit shall include conditions meeting the following requirements when applicable.

(a)(1) Technology-based effluent limitations and standards based on: effluent limitations and standards promulgated under section 301 of the CWA, or new source performance standards promulgated under section 306 of CWA, on case-by-case effluent limitations determined under section 402(a)(1) of CWA, or a combination of the three, in accordance with § 125.3 of this chapter. For new sources or new dischargers, these technology based limitations and standards are subject to the provisions of § 122.29(d) (protection period).

(2) Monitoring waivers for certain guideline-listed pollutants.

(i) The Director may authorize a discharger subject to technology-based effluent limitations guidelines and standards in an NPDES permit to forego sampling of a pollutant found at 40 CFR Subchapter N of this chapter if the discharger has demonstrated through sampling and other technical factors that the pollutant is not present in the discharge or is present only at background levels from intake water and without any increase in the pollutant due to activities of the discharger.

(ii) This waiver is good only for the term of the permit and is not available during the term of the first permit issued to a discharger.

(iii) Any request for this waiver must be submitted when applying for a reissued permit or modification of a reissued permit. The request must demonstrate through sampling or other technical information, including information generated during an earlier permit term that the pollutant is not present in the discharge or is present only at background levels from intake water and without any increase in the pollutant due to activities of the discharger.

(iv) Any grant of the monitoring waiver must be included in the permit as an express permit condition and the reasons supporting the grant must be documented in the permit's fact sheet or statement of basis.

(v) This provision does not supersede certification processes and requirements already established in existing effluent limitations guidelines and standards.

(b)(1) Other effluent limitations and standards under sections 301, 302, 303, 307, 318 and 405 of CWA. If any applicable toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under section 307(a) of CWA for a toxic pollutant and that standard or prohibition is more stringent than any limitation on the pollutant in the permit, the Director shall institute proceedings under these regulations to modify or revoke and reissue the permit to conform to the toxic effluent standard or prohibition. See also § 122.41(a).

(2) Standards for sewage sludge use or disposal under section 405(d) of the CWA unless those standards have been included in a permit issued under the appropriate provisions of subtitle C of the Solid Waste Disposal Act, Part C of Safe Drinking Water Act, the Marine Protection, Research, and Sanctuaries Act of 1972, or the Clean Air Act, or under State permit programs approved by the Administrator. When there are no applicable standards for sewage sludge use or disposal, the permit may include requirements developed on a case-by-case basis to protect public health and the environment from any adverse effects which may occur from toxic pollutants in sewage sludge. If any applicable standard for sewage sludge use or disposal is promulgated under section 405(d) of the CWA and that standard is more stringent than any limitation on the pollutant or practice in the permit, the Director may initiate proceedings under these regulations to modify or revoke and reissue the permit to conform to the standard for sewage sludge use or disposal.

(3) Requirements applicable to cooling water intake structures under section 316(b) of the CWA, in accordance with part 125, subparts I, J, and N of this chapter.

(c) Reopener clause: For any permit issued to a treatment works treating domestic sewage (including "sludge-only facilities"), the Director shall include a reopener clause to incorporate any applicable standard for sewage sludge use or disposal promulgated under section 405(d) of the CWA. The Director may promptly modify or revoke and reissue any permit containing the reopener clause required by this paragraph if the standard for sewage sludge use or disposal is more stringent than any requirements for sludge use or disposal in the permit, or controls a pollutant or practice not limited in the permit.

(d) Water quality standards and State requirements: any requirements in addition to or more stringent than promulgated effluent limitations guidelines or standards under sections 301, 304, 306, 307, 318 and 405 of CWA necessary to:

(1) Achieve water quality standards established under section 303 of the CWA, including State narrative criteria for water quality.

(i) Limitations must control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.

(ii) When determining whether a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above a narrative or numeric criteria within a State water quality standard, the permitting authority shall use procedures which account for existing controls on point and nonpoint sources of pollution, the variability of the pollutant or pollutant parameter in the effluent, the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity), and where appropriate, the dilution of the effluent in the receiving water.

(iii) When the permitting authority determines, using the procedures in paragraph (d)(1)(ii) of this section, that a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above the allowable ambient concentration of a State numeric criteria within a State water quality standard for an individual pollutant, the permit must contain effluent limits for that pollutant.

(iv) When the permitting authority determines, using the procedures in paragraph (d)(1)(ii) of this section, that a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above the numeric criterion for whole effluent toxicity, the permit must contain effluent limits for whole effluent toxicity.

(v) Except as provided in this subparagraph, when the permitting authority determines, using the procedures in paragraph (d)(1)(ii) of this section, toxicity testing data, or other information, that a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above a narrative criterion within an applicable State water quality standard, the permit must contain effluent limits for whole effluent toxicity. Limits on whole effluent toxicity are not necessary where the permitting authority demonstrates in the fact sheet or statement of basis of the NPDES permit, using the procedures in paragraph (d)(1)(ii) of this section, that chemical-specific limits for the effluent are sufficient to attain and maintain applicable numeric and narrative State water quality standards.

(vi) Where a State has not established a water quality criterion for a specific chemical pollutant that is present in an effluent at a concentration that causes, has the reasonable potential to cause, or contributes to an excursion above a narrative criterion within an applicable State water quality standard, the permitting authority must establish effluent limits using one or more of the following options:

(A) Establish effluent limits using a calculated numeric water quality criterion for the pollutant which the permitting authority demonstrates will attain and maintain applicable narrative water quality criteria and will fully protect the designated use. Such a criterion may be derived using a proposed State criterion, or an explicit State policy or regulation interpreting its narrative water quality criterion, supplemented with other relevant information which may include: EPA's Water Quality Standards Handbook, October 1983, risk assessment data, exposure data, information about the pollutant from the Food and Drug Administration, and current EPA criteria documents; or

(B) Establish effluent limits on a case-by-case basis, using EPA's water quality criteria, published under section 304(a) of the CWA, supplemented where necessary by other relevant information; or

(C) Establish effluent limitations on an indicator parameter for the pollutant of concern, provided:

(1) The permit identifies which pollutants are intended to be controlled by the use of the effluent limitation;

(2) The fact sheet required by § 124.56 sets forth the basis for the limit, including a finding that compliance with the effluent limit on the indicator parameter will result in controls on the pollutant of concern which are sufficient to attain and maintain applicable water quality standards;

(3) The permit requires all effluent and ambient monitoring necessary to show that during the term of the permit the limit on the indicator parameter continues to attain and maintain applicable water quality standards; and

(4) The permit contains a reopener clause allowing the permitting authority to modify or revoke and reissue the permit if the limits on the indicator parameter no

longer attain and maintain applicable water quality standards.

(vii) When developing water quality-based effluent limits under this paragraph the permitting authority shall ensure that:

(A) The level of water quality to be achieved by limits on point sources established under this paragraph is derived from, and complies with all applicable water quality standards; and

(B) Effluent limits developed to protect a narrative water quality criterion, a numeric water quality criterion, or both, are consistent with the assumptions and requirements of any available wasteload allocation for the discharge prepared by the State and approved by EPA pursuant to 40 CFR 130.7.

(2) Attain or maintain a specified water quality through water quality related effluent limits established under section 302 of CWA;

(3) Conform to the conditions to a State certification under section 401 of the CWA that meets the requirements of § 124.53 when EPA is the permitting authority. If a State certification is stayed by a court of competent jurisdiction or an appropriate State board or agency, EPA shall notify the State that the Agency will deem certification waived unless a finally effective State certification is received within sixty days from the date of the notice. If the State does not forward a finally effective certification within the sixty day period, EPA shall include conditions in the permit that may be necessary to meet EPA's obligation under section 301(b)(1)(C) of the CWA;

(4) Conform to applicable water quality requirements under section 401(a)(2) of CWA when the discharge affects a State other than the certifying State;

(5) Incorporate any more stringent limitations, treatment standards, or schedule of compliance requirements established under Federal or State law or regulations in accordance with section 301(b)(1)(C) of CWA;

(6) Ensure consistency with the requirements of a Water Quality Management plan approved by EPA under section 208(b) of CWA;

(7) Incorporate section 403(c) criteria under part 125, subpart M, for ocean discharges;

(8) Incorporate alternative effluent limitations or standards where warranted by "fundamentally different factors," under 40 CFR part 125, subpart D;

(9) Incorporate any other appropriate requirements, conditions, or limitations (other than effluent limitations) into a new source permit to the extent allowed by the National Environmental Policy Act, 42 U.S.C. 4321 et seq. and section 511 of the CWA, when EPA is the permit issuing authority. (See § 122.29(c)).

(e) Technology-based controls for toxic pollutants.Limitations established under paragraphs (a), (b), or (d) of this section, to control pollutants meeting the criteria listed in paragraph (e)(1) of this section. Limitations will be established in accordance with paragraph (e)(2) of this section. An explanation of the development of these limitations shall be included in the fact sheet under § 124.56(b)(1)(i).

(1) Limitations must control all toxic pollutants which the Director determines (based on information reported in a permit application under § 122.21(g)(7) or in a notification under § 122.42(a)(1) or on other information) are or may be discharged at a level greater than the level which can be achieved by the technology-based treatment requirements appropriate to the permittee under § 125.3(c) of this chapter; or

(2) The requirement that the limitations control the pollutants meeting the criteria of paragraph (e)(1) of this section will be satisfied by:

(i) Limitations on those pollutants; or

(ii) Limitations on other pollutants which, in the judgment of the Director, will provide treatment of the pollutants under paragraph (e)(1) of this section to the levels required by § 125.3(c).

(f) Notification level. A "notification level" which exceeds the notification level of § 122.42(a)(1)(i), (ii) or (iii), upon a petition from the permittee or on the Director's initiative. This new notification level may not exceed the level which can be achieved by the technology-based treatment requirements appropriate to the permittee under § 125.3(c)

(g) Twenty-four hour reporting. Pollutants for which the permittee must report violations of maximum daily discharge limitations under § 122.41(1)(6)(ii)(C) (24-hour reporting) shall be listed in the permit. This list shall include any toxic pollutant or hazardous substance, or any pollutant specifically identified as the method to control a toxic pollutant or hazardous substance.

(h) Durations for permits, as set forth in § 122.46.

(i) Monitoring requirements. In addition to § 122.48, the following monitoring requirements:

(1) To assure compliance with permit limitations, requirements to monitor:

(i) The mass (or other measurement specified in the permit) for each pollutant limited in the permit;

(ii) The volume of effluent discharged from each outfall;

(iii) Other measurements as appropriate including pollutants in internal waste streams under § 122.45(i); pollutants in intake water for net limitations under § 122.45(f); frequency, rate of discharge, etc., for noncontinuous discharges under § 122.45(e); pollutants subject to notification requirements under § 122.42(a); and pollutants in sewage sludge or other monitoring as specified in 40 CFR part 503; or as determined to be necessary on a case-by-case basis pursuant to section 405(d)(4) of the CWA.

(iv) According to test procedures approved under 40 CFR Part 136 for the analyses of pollutants or another method is required under 40 CFR subchapters N or O. In the case of pollutants for which there are no approved methods under 40 CFR Part 136 or otherwise required under 40 CFR subchapters N or O, monitoring must be

conducted according to a test procedure specified in the permit for such pollutants.

(2) Except as provided in paragraphs (i)(4) and (i)(5) of this section, requirements to report monitoring results shall be established on a case-by-case basis with a frequency dependent on the nature and effect of the discharge, but in no case less than once a year. For sewage sludge use or disposal practices, requirements to monitor and report results shall be established on a case-by-case basis with a frequency dependent on the nature and effect of the sewage sludge use or disposal practice; minimally this shall be as specified in 40 CFR part 503 (where applicable), but in no case less than once a year.

(3) Requirements to report monitoring results for storm water discharges associated with industrial activity which are subject to an effluent limitation guideline shall be established on a case-by-case basis with a frequency dependent on the nature and effect of the discharge, but in no case less than once a year.

(4) Requirements to report monitoring results for storm water discharges associated with industrial activity (other than those addressed in paragraph (i)(3) of this section) shall be established on a case-by-case basis with a frequency dependent on the nature and effect of the discharge. At a minimum, a permit for such a discharge must require:

(i) The discharger to conduct an annual inspection of the facility site to identify areas contributing to a storm water discharge associated with industrial activity and evaluate whether measures to reduce pollutant loadings identified in a storm water pollution prevention plan are adequate and properly implemented in accordance with the terms of the permit or whether additional control measures are needed;

(ii) The discharger to maintain for a period of three years a record summarizing the results of the inspection and a certification that the facility is in compliance with the plan and the permit, and identifying any incidents of non-compliance;

(iii) Such report and certification be signed in accordance with § 122.22; and

(iv) Permits for storm water discharges associated with industrial activity from inactive mining operations may, where annual inspections are impracticable, require certification once every three years by a Registered Professional Engineer that the facility is in compliance with the permit, or alternative requirements.

(5) Permits which do not require the submittal of monitoring result reports at least annually shall require that the permittee report all instances of noncompliance not reported under § 122.41(l) (1), (4), (5), and (6) at least annually.

(j) Pretreatment program for POTWs. Requirements for POTWs to:

(1) Identify, in terms of character and volume of pollutants, any Significant Industrial Users discharging into the POTW subject to Pretreatment Standards under section 307(b) of CWA and 40 CFR part 403.

(2)(i) Submit a local program when required by and in accordance with 40 CFR part 403 to assure compliance with pretreatment standards to the extent applicable under section 307(b). The local program shall be incorporated into the permit as described in 40 CFR part 403. The program must require all indirect dischargers to the POTW

to comply with the reporting requirements of 40 CFR part 403.

(ii) Provide a written technical evaluation of the need to revise local limits under 40 CFR 403.5(c)(1), following permit issuance or reissuance.

(3) For POTWs which are "sludge-only facilities," a requirement to develop a pretreatment program under 40 CFR part 403 when the Director determines that a pretreatment program is necessary to assure compliance with Section 405(d) of the CWA.

(k) Best management practices (BMPs) to control or abate the discharge of pollutants when:

(1) Authorized under section 304(e) of the CWA for the control of toxic pollutants and hazardous substances from ancillary industrial activities;

(2) Authorized under section 402(p) of the CWA for the control of storm water discharges;

(3) Numeric effluent limitations are infeasible; or

(4) The practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.

NOTE TO PARAGRAPH (k)(4): Additional technical information on BMPs and the elements of BMPs is contained in the following documents: Guidance Manual for Developing Best Management Practices (BMPs), October 1993, EPA No. 833/B-93-004, NTIS No. PB 94-178324, ERIC No. W498); Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices, September 1992, EPA No. 832/R-92-005, NTIS No. PB 92-235951, ERIC No. N482); Storm Water Management for Construction Activities, Developing Pollution Prevention Plans and Best Management Practices: Summary Guidance, EPA No. 833/R-92-001, NTIS No. PB 93-223550; ERIC No. W139; Storm Water Management for Industrial Activities, Developing Pollution Prevention Plans and Best Management Practices, September 1992; EPA 832/R-92-006, NTIS No. PB 92-235969, ERIC No. N477; Storm Water Management for Industrial Activities, Developing Pollution Prevention Plans and Best Management Practices: Summary Guidance, EPA 833/R-92-002, NTIS No. PB 94-133782; ERIC No. W492. Copies of those documents (or directions on how to obtain them) can be obtained by contacting either the Office of Water Resource Center (using the EPA document number as a reference) at (202) 260-7786; or the Educational Resources Information Center (ERIC) (using the ERIC number as a reference) at (800) 276-0462. Updates of these documents or additional BMP documents may also be available. A list of EPA BMP guidance documents is available on the OWM Home Page at http://www.epa.gov/owm. In addition, States may have BMP guidance documents.

These EPA guidance documents are listed here only for informational purposes; they are not binding and EPA does not intend that these guidance documents have any mandatory, regulatory effect by virtue of their listing in this note.

(l) Reissued permits. (1) Except as provided in paragraph (l)(2) of this section when a permit is renewed or reissued, interim effluent limitations, standards or conditions

must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit (unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued and would constitute cause for permit modification or revocation and reissuance under § 122.62.)

(2) In the case of effluent limitations established on the basis of Section 402(a)(1)(B) of the CWA, a permit may not be renewed, reissued, or modified on the basis of effluent guidelines promulgated under section 304(b) subsequent to the original issuance of such permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit.

(i) Exceptions -- A permit with respect to which paragraph (l)(2) of this section applies may be renewed, reissued, or modified to contain a less stringent effluent limitation applicable to a pollutant, if --

(A) Material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation;

(B)(1) Information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance; or

(2) The Administrator determines that technical mistakes or mistaken interpretations of law were made in issuing the permit under section 402(a)(1)(b);

(C) A less stringent effluent limitation is necessary because of events over which the permittee has no control and for which there is no reasonably available remedy;

(D) The permittee has received a permit modification under section 301(c), 301(g), 301(h), 301(i), 301(k), 301(n), or 316(a); or

(E) The permittee has installed the treatment facilities required to meet the effluent limitations in the previous permit and has properly operated and maintained the facilities but has nevertheless been unable to achieve the previous effluent limitations, in which case the limitations in the reviewed, reissued, or modified permit may reflect the level of pollutant control actually achieved (but shall not be less stringent than required by effluent guidelines in effect at the time of permit renewal, reissuance, or modification).

(ii) Limitations. In no event may a permit with respect to which paragraph (l)(2) of this section applies be renewed, reissued, or modified to contain an effluent limitation which is less stringent than required by effluent guidelines in effect at the time the permit is renewed, reissued, or modified. In no event may such a permit to discharge into waters be renewed, issued, or modified to contain a less stringent effluent limitation if the implementation of such limitation would result in a violation of a water quality standard under section 303 applicable to such waters.

(m) Privately owned treatment works. For a privately owned treatment works, any conditions expressly applicable to any user, as a limited co-permittee, that may be necessary in the permit issued to the treatment works to ensure compliance with

applicable requirements under this part. Alternatively, the Director may issue separate permits to the treatment works and to its users, or may require a separate permit application from any user. The Director's decision to issue a permit with no conditions applicable to any user, to impose conditions on one or more users, to issue separate permits, or to require separate applications, and the basis for that decision, shall be stated in the fact sheet for the draft permit for the treatment works.

(n) Grants. Any conditions imposed in grants made by the Administrator to POTWs under sections 201 and 204 of CWA which are reasonably necessary for the achievement of effluent limitations under section 301 of CWA.

(o) Sewage sludge. Requirements under section 405 of CWA governing the disposal of sewage sludge from publicly owned treatment works or any other treatment works treating domestic sewage for any use for which regulations have been established, in accordance with any applicable regulations.

(p) Coast Guard. When a permit is issued to a facility that may operate at certain times as a means of transportation over water, a condition that the discharge shall comply with any applicable regulations promulgated by the Secretary of the department in which the Coast Guard is operating, that establish specifications for safe transportation, handling, carriage, and storage of pollutants.

(q) Navigation. Any conditions that the Secretary of the Army considers necessary to ensure that navigation and anchorage will not be substantially impaired, in accordance with § 124.59 of this chapter.

(r) Great Lakes. When a permit is issued to a facility that discharges intothe Great Lakes System (as defined in 40 CFR 132.2), conditions promulgated by the State, Tribe, or EPA pursuant to 40 CFR part 132.

(s) Qualifying State, Tribal, or local programs. (1) For storm water discharges associated with small construction activity identified in § 122.26(b)(15), the Director may include permit conditions that incorporate qualifying State, Tribal, or local erosion and sediment control program requirements by reference. Where a qualifying State, Tribal, or local program does not include one or more of the elements in this paragraph (s)(1), then the Director must include those elements as conditions in the permit. A qualifying State, Tribal, or local erosion and sediment control program is one that includes:

(i) Requirements for construction site operators to implement appropriate erosion and sediment control best management practices;

(ii) Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;

(iii) Requirements for construction site operators to develop and implement a storm water pollution prevention plan. (A storm water pollution prevention plan includes site descriptions, descriptions of appropriate control measures, copies of approved State, Tribal or local requirements, maintenance procedures, inspection procedures, and identification of non-storm water discharges); and

(iv) Requirements to submit a site plan for review that incorporates consideration of potential water quality impacts.

(2) For storm water discharges from construction activity identified in § 122.26(b)(14)(x), the Director may include permit conditions that incorporate qualifying State, Tribal, or local erosion and sediment control program requirements by reference. A qualifying State, Tribal or local erosion and sediment control program is one that includes the elements listed in paragraph (s)(1) of this section and any additional requirements necessary to achieve the applicable technology-based standards of "best available technology" and "best conventional technology" based on the best professional judgment of the permit writer.

40 CFR 122.44

TAB "29"

LEXSTAT 40 CFR 130.2

*** THIS SECTION IS CURRENT THROUGH THE JUNE 17, 2010 ISSUE OF ***
*** THE FEDERAL REGISTER ***

TITLE 40 -- PROTECTION OF ENVIRONMENT
CHAPTER I -- ENVIRONMENTAL PROTECTION AGENCY
SUBCHAPTER D -- WATER PROGRAMS
PART 130 -- WATER QUALITY PLANNING AND MANAGEMENT

Go to the CFR Archive Directory

40 CFR 130.2

§ 130.2 Definitions.

(a) The Act. The Clean Water Act, as amended, *33 U.S.C. 1251* et seq.

(b) Indian Tribe. Any Indian Tribe, band, group, or community recognized by the Secretary of the Interior and exercising governmental authority over a Federal Indian reservation.

(c) Pollution. The man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water.

(d) Water quality standards (WQS). Provisions of State or Federal law which consist of a designated use or uses for the waters of the United States and water quality criteria for such waters based upon such uses. Water quality standards are to protect the public health or welfare, enhance the quality of water and serve the purposes of the Act.

(e) Load or loading. An amount of matter or thermal energy that is introduced into a receiving water; to introduce matter or thermal energy into a receiving water. Loading may be either man-caused (pollutant loading) or natural (natural background loading).

(f) Loading capacity. The greatest amount of loading that a water can receive without violating water quality standards.

(g) Load allocation (LA). The portion of a receiving water's loading capacity that is attributed either to one of its existing or future nonpoint sources of pollution or to natural background sources. Load allocations are best estimates of the loading, which may range from reasonably accurate estimates to gross allotments, depending on the availability of data and appropriate techniques for predicting the loading. Wherever possible,natural and nonpoint source loads should be distinguished.

(h) Wasteload allocation (WLA). The portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution. WLAs constitute a type of water quality-based effluent limitation.

(i) Total maximum daily load (TMDL). The sum of the individual WLAs for point sources and LAs for nonpoint sources and natural background. If a receiving water has only one point source discharger, the TMDL is the sum of that point source WLA plus the LAs for any nonpoint sources of pollution and natural background sources, tributaries, or

adjacent segments. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure. If Best Management Practices (BMPs) or other nonpoint source pollution controls make more stringent load allocations practicable, then wasteload allocations can be made less stringent. Thus, the TMDL process provides for nonpoint source control tradeoffs.

(j) Water quality limited segment. Any segment where it is known that water quality does not meet applicable water quality standards, and/or is not expected to meet applicable water quality standards, even after the application of the technology-based effluent limitations required by sections 301(b) and 306 of the Act.

(k) Water quality management (WQM) plan. A State or areawide waste treatment management plan developed and updated in accordance with the provisions of sections 205(j), 208 and 303 of the Act and this regulation.

(l) Areawide agency. An agency designated under section 208 of the Act, which has responsibilities for WQM planning within a specified area of a State.

(m) Best Management Practice (BMP). Methods, measures or practices selected by an agency to meet its nonpoint source control needs. BMPs include but are not limited to structural and nonstructural controls and operation and maintenance procedures. BMPs can be applied before, during and after pollution-producing activities to reduce or eliminate the introduction of pollutants into receiving waters.

(n) Designated management agency (DMA). An agency identified by a WQM plan and designated by the Governor to implement specific control recommendations.

HISTORY: *[50 FR 1779,* Jan. 11, 1985, as amended at *54 FR 14359,* Apr. 11, 1989; *65 FR 43586, 43662,* July 13, 2000, withdrawn at *68 FR 13608, 13614,* Mar. 19, 2003; *66 FR 53044, 53048,* Oct. 18, 2001]

AUTHORITY: AUTHORITY NOTE APPLICABLE TO ENTIRE PART:
33 U.S.C. 1251 et seq.

NOTES: NOTES APPLICABLE TO ENTIRE CHAPTER:
[PUBLISHER'S NOTE: Nomenclature changes to Chapter I appear at *65 FR 47323, 47324, 47325,* Aug. 2, 2000.]
[PUBLISHER'S NOTE: For Federal Register citations concerning Chapter 1 Notice of implementation policy, see: *71 FR 25504,* May 1, 2006.]
[PUBLISHER'S NOTE: For Federal Register citations concerning Chapter 1 Findings, see: *74 FR 66496,* Dec. 15, 2009.]

NOTES APPLICABLE TO ENTIRE PART:
[PUBLISHER'S NOTE: For Federal Register citations concerning Part 130 Notice of change in procedures, see: *73 FR 52928,* Sept. 12, 2008.]

647 words

TAB "30"

40 CFR 130.3

§ 130.3 Water quality standards.

A water quality standard (WQS) defines the water quality goals of a water body, or portion thereof, by designating the use or uses to be made of the water and by setting criteria necessary to protect the uses. States and EPA adopt WQS to protect public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act (CWA). Serve the purposes of Act (as defined in sections 101(a)(2) and 303(c) of the Act) means that WQS should, wherever attainable, provide water quality for the protection and propagation of fish, shellfish and wildlife and for recreation in and on the water and take into consideration their use and value for public water supplies, propagation of fish, shellfish, wildlife, recreation in and on the water, and agricultural, industrial and other purposes including navigation.

Such standards serve the dual purposes of establishing the water quality goals for a specific water body and serving as the regulatory basis for establishment of water quality-based treatment controls and strategies beyond the technology-based level of treatment required by sections 301(b) and 306 of the Act. States shall review and revise WQS in accordance with applicable regulations and, as appropriate, update their Water Quality Management (WQM) plans to reflect such revisions. Specific WQS requirements are found in 40 CFR part 131.

40 CFR 130.3

TAB "31"

40 CFR 130.7
§ 130.7 Total maximum daily loads (TMDL) and individual water quality-based effluent limitations.

(a) General. The process for identifying water quality limited segments still requiring wasteload allocations, load allocations and total maximum daily loads (WLAs/LAs and TMDLs), setting priorities for developing these loads; establishing these loads for segments identified, including water quality monitoring, modeling, data analysis, calculation methods, and list of pollutants to be regulated; submitting the State's list of segments identified, priority ranking, and loads established (WLAs/LAs/TMDLs) to EPA for approval; incorporating the approved loads into the State's WQM plans and NPDES permits; and involving the public, affected dischargers, designated areawide agencies, and local governments in this process shall be clearly described in the State Continuing Planning Process (CPP).

(b) Identification and priority setting for water quality-limited segments still requiring TMDLs.

(1) Each State shall identify those water quality-limited segments still requiring TMDLs within its boundaries for which:

(i) Technology-based effluent limitations required by sections 301(b), 306, 307, or other sections of the Act;

(ii) More stringent effluent limitations (including prohibitions) required by either State or local authority preserved by section 510 of the Act, or Federal authority (law, regulation, or treaty); and

(iii) Other pollution control requirements (e.g., best management practices) required by local, State, or Federal authority are not stringent enough to implement any water quality standards (WQS) applicable to such waters.

(2) Each State shall also identify on the same list developed under paragraph (b)(1) of this section those water quality-limited segments still requiring TMDLs or parts thereof within its boundaries for which controls on thermal discharges under section 301 or State or local requirements are not stringent enough to assure protection and propagation of a balanced indigenous population of shellfish, fish and wildlife.

(3) For the purposes of listing waters under § 130.7(b), the term "water quality standard applicable to such waters" and "applicable water quality standards" refer to those water quality standards established under section 303 of the Act, including numeric criteria, narrative criteria, waterbody uses, and antidegradation requirements.

(4) The list required under §§ 130.7(b)(1) and 130.7(b)(2) of this section shall include a priority ranking for all listed water quality-limited segments still requiring TMDLs, taking into account the severity of the pollution and the uses to be made of such waters and shall identify the pollutants causing or expected to cause violations of the applicable water quality standards. The priority ranking shall specifically include the identification of waters targeted for TMDL development in the next two years.

(5) Each State shall assemble and evaluate all existing and readily available water quality-related data and information to develop the list required by §§ 1A130.7(b)(1) and 130.7(b)(2). At a minimum "all existing and readily available water quality-related data and information" includes but is not limited to all of the existing and readily available data and information about the following categories of waters:

(i) Waters identified by the State in its most recent section 305(b) report as "partially meeting" or "not meeting" designated uses or as "threatened";

(ii) Waters for which dilution calculations or predictive models indicate nonattainment of applicable water quality standards;

(iii) Waters for which water quality problems have been reported by local, state, or federal agencies; members of the public; or academic institutions. These organizations and groups should be actively solicited for research they may be conducting or reporting. For example, university researchers, the United States Department of Agriculture, the National Oceanic and Atmospheric Administration, the United States Geological Survey, and the United States Fish and Wildlife Service are good sources of field data; and

(iv) Waters identified by the State as impaired or threatened in a nonpoint assessment submitted to EPA under section 319 of the CWA or in any updates of the assessment.

(6) Each State shall provide documentation to the Regional Administrator to support the State's determination to list or not to list its waters as required by §§ 130.7(b)(1) and 130.7(b)(2). This documentation shall be submitted to the Regional Administrator together with the list required by §§ 130.7(b)(1) and 130.7(b)(2) and shall include at a minimum:

(i) A description of the methodology used to develop the list; and

(ii) A description of the data and information used to identify waters, including a description of the data and information used by the State as required by § 130.7(b)(5); and

(iii) A rationale for any decision to not use any existing and readily available data and information for any one of the categories of waters as described in § 130.7(b)(5); and

(iv) Any other reasonable information requested by the Regional Administrator. Upon request by the Regional Administrator, each State must demonstrate good cause for not including a water or waters on the list. Good cause includes, but is not limited to, more recent or accurate data; more sophisticated water quality modeling; flaws in the original analysis that led to the water being listed in the categories in § 130.7(b)(5); or changes in conditions, e.g., new control equipment, or elimination of discharges.

(c) Development of TMDLs and individual water quality based effluent limitations.

(1) Each State shall establish TMDLs for the water quality limited segments identified in paragraph (b)(1) of this section, and in accordance with the priority ranking. For

pollutants other than heat, TMDLs shall be established at levels necessary to attain and maintain the applicable narrative and numerical WQS with seasonal variations and a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality. Determinations of TMDLs shall take into account critical conditions for stream flow, loading, and water quality parameters.

(i) TMDLs may be established using a pollutant-by-pollutant or biomonitoring approach. In many cases both techniques may be needed. Site-specific information should be used wherever possible.

(ii) TMDLs shall be established for all pollutants preventing or expected to prevent attainment of water quality standards as identified pursuant to paragraph (b)(1) of this section. Calculations to establish TMDLs shall be subject to public review as defined in the State CPP.

(2) Each State shall estimate for the water quality limited segments still requiring TMDLs identified in paragraph (b)(2) of this section, the total maximum daily thermal load which cannot be exceeded in order to assure protection and propagation of a balanced, indigenous population of shellfish, fish and wildlife. Such estimates shall take into account the normal water temperatures, flow rates, seasonal variations, existing sources of heat input, and the dissipative capacity of the identified waters or parts thereof. Such estimates shall include a calculation of the maximum heat input that can be made into each such part and shall include a margin of safety which takes into account any lack of knowledge concerning the development of thermal water quality criteria for protection and propagation of a balanced, indigenous population of shellfish, fish and wildlife in the identified waters or parts thereof.

(d) Submission and EPA approval. (1) Each State shall submit biennially to the Regional Administrator beginning in 1992 the list of waters, pollutants causing impairment, and the priority ranking including waters targeted for TMDL development within the next two years as required under paragraph (b) of this section. For the 1992 biennial submission, these lists are due no later than October 22, 1992. Thereafter, each State shall submit to EPA lists required under paragraph (b) of this section on April 1 of every even-numbered year. For the year 2000 submission, a State must submit a list required under paragraph (b) of this section only if a court order or consent decree, or commitment in a settlement agreement dated prior to January 1, 2000, expressly requires EPA to take action related to that State's year 2000 list. For the year 2002 submission, a State must submit a list required under paragraph (b) of this section by October 1, 2002, unless a court order, consent decree or commitment in a settlement agreement expressly requires EPA to take an action related to that State's 2002 list prior to October 1, 2002, in which case, the State must submit a list by April 1, 2002. The list of waters may be submitted as part of the State's biennial water quality report required by § 130.8 of this part and section 305(b) of the CWA or submitted under separate cover. All and TMDLs established under paragraph (c) for water quality limited segments shall continue to be submitted to EPA for review and approval. Schedules for submission of TMDLs shall be determined by the Regional Administrator and the State.

(2) The Regional Administrator shall either approve or disapprove such listing and loadings not later than 30 days after the date of submission. The Regional Administrator shall approve a list developed under § 130.7(b) that is submitted after the effective date of this rule only if it meets the requirements of § 130.7(b). If the

Regional Administrator approves such listing and loadings, the State shall incorporate them into its current WQM plan. If the Regional Administrator disapproves such listing and loadings, he shall, not later than 30 days after the date of such disapproval, identify such waters in such State and establish such loads for such waters as determined necessary to implement applicable WQS. The Regional Administrator shall promptly issue a public notice seeking comment on such listing and loadings. After considering public comment and making any revisions he deems appropriate, the Regional Administrator shall transmit the listing and loads to the State, which shall incorporate them into its current WQM plan.

(e) For the specific purpose of developing information and as resources allow, each State shall identify all segments within its boundaries which it has not identified under paragraph (b) of this section and estimate for such waters the TMDLs with seasonal variations and margins of safety, for those pollutants which the Regional Administrator identifies under section 304(a)(2) as suitable for such calculation and for thermal discharges, at a level that would assure protection and propagation of a balanced indigenous population of fish, shellfish and wildlife. However, there is no requirement for such loads to be submitted to EPA for approval, and establishing TMDLs for those waters identified in paragraph (b) of this section shall be given higher priority.

40 CFR 130.7

TAB "32"

40 CFR 131.3
§ 131.3 Definitions.

(a) The Act means the Clean Water Act (Pub. L. 92-500, as amended, (33 U.S.C. 1251 et seq.)).

(b) Criteria are elements of State water quality standards, expressed as constituent concentrations, levels, or narrative statements, representing a quality of water that supports a particular use. When criteria are met, water quality will generally protect the designated use.

(c) Section 304(a) criteria are developed by EPA under authority of section 304(a) of the Act based on the latest scientific information on the relationship that the effect of a constituent concentration has on particular aquatic species and/or human health. This information is issued periodically to the States as guidance for use in developing criteria.

(d) Toxic pollutants are those pollutants listed by the Administrator under section 307(a) of the Act.

(e) Existing uses are those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards.

(f) Designated uses are those uses specified in water quality standards for each water body or segment whether or not they are being attained.

(g) Use attainability analysis is a structured scientific assessment of the factors affecting the attainment of the use which may include physical, chemical, biological, and economic factors as described in § 131.10(g).

(h) Water quality limited segment means any segment where it is known that water quality does not meet applicable water quality standards, and/or is not expected to meet applicable water quality standards, even after the application of the technology-bases effluent limitations required by sections 301(b) and 306 of the Act.

(i) Water quality standards are provisions of State or Federal law which consist of a designated use or uses for the waters of the United States and water quality criteria for such waters based upon such uses. Water quality standards are to protect the public health or welfare, enhance the quality of water and serve the purposes of the Act.

(j) States include: The 50 States, the District of Columbia, Guam, the Commonwealth of Puerto Rico, Virgin Islands, American Samoa, the Trust Territory of the Pacific Islands, the Commonwealth of the Northern Mariana Islands, and Indian Tribes that EPA determines to be eligible for purposes of a water quality standards program.

(k) Federal Indian Reservation, Indian Reservation, or Reservation means all land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and including rights-of-way running through the reservation."

(l) Indian Tribe or Tribe means any Indian Tribe, band, group, or community recognized by the Secretary of the Interior and exercising governmental authority over a Federal Indian reservation.

40 CFR 131.3

TAB "33"

Federal Register

Thursday,
May 18, 2000

Part III

Environmental Protection Agency

40 CFR Part 131
Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California; Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 131

[FRL–6587–9]

RIN 2040–AC44

Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: This final rule promulgates: numeric aquatic life criteria for 23 priority toxic pollutants; numeric human health criteria for 57 priority toxic pollutants; and a compliance schedule provision which authorizes the State to issue schedules of compliance for new or revised National Pollutant Discharge Elimination System permit limits based on the federal criteria when certain conditions are met.

EPA is promulgating this rule based on the Administrator's determination that numeric criteria are necessary in the State of California to protect human health and the environment. The Clean Water Act requires States to adopt numeric water quality criteria for priority toxic pollutants for which EPA has issued criteria guidance, the presence or discharge of which could reasonably be expected to interfere with maintaining designated uses.

EPA is promulgating this rule to fill a gap in California water quality standards that was created in 1994 when a State court overturned the State's water quality control plans which contained water quality criteria for priority toxic pollutants. Thus, the State of California has been without numeric water quality criteria for many priority toxic pollutants as required by the Clean Water Act, necessitating this action by EPA. These Federal criteria are legally applicable in the State of California for inland surface waters, enclosed bays and estuaries for all purposes and programs under the Clean Water Act.

EFFECTIVE DATE: This rule shall be effective May 18, 2000.

ADDRESSES: The administrative record for today's final rule is available for public inspection at the U.S. Environmental Protection Agency, Region 9, Water Division, 75 Hawthorne Street, San Francisco, California 94105, between the hours of 8:00 a.m. and 4:30 p.m. For access to the administrative record, call Diane E. Fleck, P.E., Esq. at 415 744–1984 for an appointment. A reasonable fee will be charged for photocopies.

FOR FURTHER INFORMATION CONTACT: Diane E. Fleck, P.E., Esq. or Philip Woods, U.S. Environmental Protection Agency, Region 9, Water Division, 75 Hawthorne Street, San Francisco, California 94105, 415–744–1984 or 415–744–1997, respectively.

SUPPLEMENTARY INFORMATION: This preamble is organized according to the following outline:

A. Potentially Affected Entities

Citizens concerned with water quality in California may be interested in this rulemaking. Entities discharging pollutants to waters of the United States in California could be affected by this rulemaking since water quality criteria are used by the State in developing National Pollutant Discharge Elimination System (NPDES) permit limits. Categories and entities that ultimately may be affected include:

Category	Examples of potentially affected entities
Industry	Industries discharging pollutants to surface waters in California or to publicly-owned treatment works.
Municipalities	Publicly-owned treatment works discharging pollutants to surface waters in California

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be affected by this action. This table lists the types of entities that EPA is now aware could potentially be affected by this action. Other types of entities not listed in the table could also be affected. To determine whether your facility might be affected by this action, you should carefully examine the applicability criteria in § 131.38(c). If you have questions regarding the applicability of this action to a particular entity, consult the persons listed in the preceding FOR FURTHER INFORMATION CONTACT section.

B. Introduction and Overview

1. Introduction

This section introduces the topics which are addressed in the preamble and provides a brief overview of EPA's basis and rationale for promulgating Federal criteria for the State of California. Section C briefly describes the evolution of the efforts to control toxic pollutants; these efforts include the changes enacted in the 1987 CWA Amendments, which are the basis for this rule. Section D summarizes California's efforts since 1987 to implement the requirements of CWA section 303(c)(2)(B) and describes EPA's procedure and actions for determining whether California has fully implemented CWA section 303(c)(2)(B). Section E provides the rationale and approach for developing this final rule, including a discussion of EPA's legal basis for this final rule. Section F describes the development of the criteria included in this rule. Section G summarizes the provisions of the final rule and discusses implementation issues. Sections H, I, J, K, L, M, N, O, P, and Q briefly address the requirements of Executive Order 12866, the Unfunded Mandates Reform Act of 1995, the Regulatory Flexibility Act, the Paperwork Reduction Act, the Endangered Species Act, the Congressional Review Act, Executive Order 13084, Consultation and Coordination with Indian Tribal Governments, the National Technology Transfer and Advancement Act, and Executive Order 13132, Federalism, respectively.

The proposal for this rulemaking was published in the Federal Register on August 5, 1997. Changes from the proposal are generally addressed in the body of this preamble and specifically addressed in the response to comments document included in the administrative record for this rulemaking. EPA responded to all comments on the proposed rule, including comments received after the September 26, 1997, deadline. Although EPA is under no legal obligation to respond to late comments, EPA made a policy decision to respond to all comments.

Since detailed information concerning many of the topics in this preamble was published previously in the Federal Register in preambles for this and other rulemakings, references are frequently made to those preambles. Those rulemakings include: Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California; Proposed Rule, 62 FR 42159, August 5, 1997 (referred to as the "proposed CTR"); Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants, 57 FR 60848, December 22, 1992 (referred to as the "National Toxics Rule" or "NTR"); and the NTR as amended by Administrative Stay of Federal Water Quality Criteria for Metals and Interim Final Rule, Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants; States' Compliance—Revision of Metals Criteria, 60 FR 22228, May 4, 1995 (referred to as the "National Toxics Rule [NTR], as amended"). The NTR, as amended, is codified at 40 CFR 131.36. A copy of the proposed CTR and its preamble, and the NTR, as amended, and its preambles are contained in the administrative record for this rulemaking.

EPA is making this final rule effective upon publication. Under the Administrative Procedure Act, 5 U.S.C. 553(d)(3), agencies must generally publish a rule no more than 30 days prior to the effective date of the rule except as otherwise provided for by the Agency for good cause. The purpose of the 30-day waiting period is to give affected parties a reasonable time to adjust their behavior before the final rule takes effect. See *Omnipoint Corp.* v. *F.C.C.*, 78 F.3d 620, 630–631 (D.C. Cir. 1996); *Riverbend Farms, Inc.* v. *Madigan*, 958 F.2d 1479, 1485 (9th Cir. 1992).

In this instance, EPA finds good cause to make the final rule effective upon publication. In order to find good cause, an Agency needs to find that the 30-day period would be: (1) Impracticable, (2) unnecessary, or (3) contrary to the public interest. Here EPA is relying on the second reason to support its finding of good cause. EPA also notes that the State has requested EPA to make the rule immediately effective.

EPA finds that in this instance, waiting 30 days to make the rule effective is unnecessary. As explained in further detail elsewhere in this preamble, this rule is not self implementing; rather it establishes ambient conditions that the State of California will implement in future permit proceedings. These permit proceedings will, by regulation, take longer than 30 days to complete. This means that although the rule is immediately effective, no discharger's conduct would be altered under the rule in less than 30 days, and therefore the 30-day period is unnecessary.

2. Overview

This final rule establishes ambient water quality criteria for priority toxic pollutants in the State of California. The criteria in this final rule will supplement the water quality criteria promulgated for California in the NTR, as amended. In 1991, EPA approved a number of water quality criteria (discussed in section D), for the State of California. Since EPA had approved these criteria, it was not necessary to include them in the 1992 NTR for these criteria. However, the EPA-approved criteria were subsequently invalidated in State litigation. Thus, this final rule contains criteria to fill the gap created by the State litigation.

This final rule does not change or supersede any criteria previously promulgated for the State of California in the NTR, as amended. Criteria which EPA promulgated for California in the NTR, as amended, are footnoted in the final table at 131.38(b)(1), so that readers may see the criteria promulgated in the NTR, as amended, for California and the criteria promulgated through this rulemaking for California in the same table. This final rule is not intended to apply to waters within Indian Country. EPA recognizes that there are possibly waters located wholly or partly in Indian Country that are included in the State's basin plans. EPA will work with the State and Tribes to identify any such waters and determine whether further action to protect water quality in Indian Country is necessary.

This rule is important for several environmental, programmatic and legal reasons. Control of toxic pollutants in surface waters is necessary to achieve the CWA's goals and objectives. Many of California's monitored river miles, lake acres, and estuarine waters have elevated levels of toxic pollutants. Recent studies on California water bodies indicate that elevated levels of toxic pollutants exist in fish tissue which result in fishing advisories or bans. These toxic pollutants can be attributed to, among other sources, industrial and municipal discharges.

Water quality standards for toxic pollutants are important to State and EPA efforts to address water quality problems. Clearly established water quality goals enhance the effectiveness of many of the State's and EPA's water programs including permitting, coastal water quality improvement, fish tissue quality protection, nonpoint source controls, drinking water quality protection, and ecological protection. Numeric criteria for toxic pollutants allow the State and EPA to evaluate the adequacy of existing and potential control measures to protect aquatic ecosystems and human health. Numeric criteria also provide a more precise basis for deriving water quality-based effluent limitations (WQBELs) in

National Pollutant Discharge Elimination System (NPDES) permits and wasteload allocations for total maximum daily loads (TMDLs) to control toxic pollutant discharges. Congress recognized these issues when it enacted section 303(c)(2)(B) to the CWA.

While California recognizes the need for applicable water quality standards for toxic pollutants, its adoption efforts have been stymied by a variety of factors. The Administrator has decided to exercise her CWA authorities to move forward the toxic control program, consistent with the CWA and with the State of California's water quality standards program.

Today's action will also help restore equity among the States. The CWA is designed to ensure all waters are sufficiently clean to protect public health and/or the environment. The CWA allows some flexibility and differences among States in their adopted and approved water quality standards, but it should be implemented in a manner that ensures a level playing field among States. Although California has made important progress toward satisfying CWA requirements, it has not satisfied CWA section 303(c)(2)(B) by adopting numeric water quality criteria for toxic pollutants. This section was added to the CWA by Congress in 1987. Prior to today, the State of California had been the only State in the Nation for which CWA section 303(c)(2)(B) had remained substantially unimplemented after EPA's promulgation of the NTR in December of 1992. Section 303(c)(4) of the CWA authorizes the EPA Administrator to promulgate standards where necessary to meet the requirements of the Act. The Administrator determined that this rule was a necessary and important component for the implementation of CWA section 303(c)(2)(B) in California.

EPA acknowledges that the State of California is working to satisfy CWA section 303(c)(2)(B). When the State formally adopts, and EPA approves, criteria consistent with statutory requirements, as envisioned by Congress in the CWA, EPA intends to stay this rule. If within the applicable time frame for judicial review, the States' standards are challenged, EPA will withdraw this rule after such judicial review is complete and the State standards are sustained.

C. Statutory and Regulatory Background

The preamble to the August 5, 1997, proposed rule provided a general discussion of EPA's statutory and regulatory authority to promulgate water quality criteria for the State of California. See 62 FR 42160–42163. EPA is including that discussion in the record for the final rule. Commenters questioned EPA's authority to promulgate certain aspects of the proposal. EPA is responding to those comments in the appropriate sections of this preamble, and in the response to comments document included in the administrative record for this rulemaking. Where appropriate, EPA's responses expand upon the discussion of statutory and regulatory authority found in the proposal.

D. California Water Quality Standards Actions

1. California Regional Water Quality Control Board Basin Plans, and the Inland Surface Waters Plan (ISWP) and the Enclosed Bays and Estuaries Plan (EBEP) of April 1991

The State of California regulates water quality through its State Water Resources Control Board (SWRCB) and through nine Regional Water Quality Control Boards (RWQCBs). Each of the nine RWQCBs represents a different geographic area; area boundaries are generally along watershed boundaries. Each RWQCB maintains a Basin Plan which contains the designated uses of the water bodies within its respective geographic area within California. These designated uses (or "beneficial uses" under State law) together with legally-adopted criteria (or "objectives" under State law), comprise water quality standards for the water bodies within each of the Basin areas. Each of the nine RWQCBs undergoes a triennial basin planning review process, in compliance with CWA section 303. The SWRCB provides assistance to the RWQCBs.

Most of the Basin Plans contain conventional pollutant objectives such as dissolved oxygen. None of the Basin Plans contains a comprehensive list of priority toxic pollutant criteria to satisfy CWA section 303(c)(2)(B). The nine RWQCBs and the SWRCB had intended that the priority toxic pollutant criteria contained in the three SWRCB statewide plans, the Inland Surface Waters Plan (ISWP), the Enclosed Bays and Estuaries Plan (EBEP), and the Ocean Plan, apply to all basins and satisfy CWA section 303(c)(2)(B).

On April 11, 1991, the SWRCB adopted two statewide water quality control plans, the ISWP and the EBEP. These statewide plans contained narrative and numeric water quality criteria for toxic pollutants, in part to satisfy CWA section 303(c)(2)(B). The water quality criteria contained in the SWRCB statewide plans, together with the designated uses in each of the Basin Plans, created a set of water quality standards for waters within the State of California.

Specifically, the two plans established water quality criteria or objectives for all fresh waters, bays and estuaries in the State. The plans contained water quality criteria for some priority toxic pollutants, provisions relating to whole effluent toxicity, implementation procedures for point and nonpoint sources, and authorizing compliance schedule provisions. The plans also included special provisions affecting waters dominated by reclaimed water (labeled as Category (a) waters), and waters dominated by agricultural drainage and constructed agricultural drains (labeled as Category (b) and (c) waters, respectively).

2. EPA's Review of California Water Quality Standards for Priority Toxic Pollutants in the ISWP and EBEP, and the National Toxics Rule

The EPA Administrator has delegated the responsibility and authority for review and approval or disapproval of all new or revised State water quality standards to the EPA Regional Administrators (see 40 CFR 131.21). Thus, State actions under CWA section 303(c)(2)(B) are submitted to the appropriate EPA Regional Administrator for review and approval.

In mid-April 1991, the SWRCB submitted to EPA for review and approval the two statewide water quality control plans, the ISWP and the EBEP. On November 6, 1991, EPA Region 9 formally concluded its review of the SWRCB's plans. EPA approved the narrative water quality criterion and the toxicity criterion in each of the plans. EPA also approved the numeric water quality criteria contained in both plans, finding them to be consistent with the requirements of section 303(c)(2)(B) of the CWA and with EPA's national criteria guidance published pursuant to section 304(a) of the CWA.

EPA noted the lack of criteria for some pollutants, and found that, because of the omissions, the plans did not fully satisfy CWA section 303(c)(2)(B). The plans did not contain criteria for all listed pollutants for which EPA had published national criteria guidance. The ISWP contained human health criteria for only 65 pollutants, and the EBEP contained human health criteria for only 61 pollutants for which EPA had issued section 304(a) guidance criteria. Both the ISWP and EBEP contained aquatic life criteria for all pollutants except cyanide and chromium III (freshwater only) for which EPA has CWA section

304(a) criteria guidance. The SWRCB's administrative record stated that all priority pollutants with EPA criteria guidance were likely to be present in California waters. However, the SWRCB's record contained insufficient information to support a finding that the excluded pollutants were not reasonably expected to interfere with designated uses of the waters of the State.

Although EPA approved the statewide selenium objective in the ISWP and EBEP, EPA disapproved the objective for the San Francisco Bay and Delta, because there was clear evidence that the objective would not protect the designated fish and wildlife uses (the California Department of Health Services had issued waterfowl consumption advisories due to selenium concentrations, and scientific studies had documented selenium toxicity to fish and wildlife). EPA restated its commitment to object to National Pollutant Discharge Elimination System (NPDES) permits issued for San Francisco Bay that contained effluent limits based on an objective greater than 5 parts per billion (ppb) (four day average) and 20 ppb (1 hour average), the freshwater criteria. EPA reaffirmed its disapproval of Californias' site-specific selenium objective for portions of the San Joaquin River, Salt Slough, and Mud Slough. EPA also disapproved of the categorical deferrals and exemptions. These disapprovals included the disapproval of the State's deferral of water quality objectives to effluent dominated streams (Category a) and to streams dominated by agricultural drainage (Category b), and the disapproval of the exemption of water quality objectives to constructed agricultural drains (Category c). EPA found the definitions of the categories imprecise and overly broad which could have led to an incorrect interpretation.

Since EPA had disapproved portions of each of the California statewide plans which were necessary to satisfy CWA section 303(c)(2)(B), certain disapproved aspects of California's water quality standards were included in EPA's promulgation of the National Toxics Rule (NTR) (40 CFR 131.36, 57 FR 60848). EPA promulgated specific criteria for certain water bodies in California.

The NTR was amended, effective April 14, 1995, to stay certain metals criteria which had been promulgated as total recoverable. Effective April 15, 1995, EPA promulgated interim final metals criteria as dissolved concentrations for those metals which had been stayed (Administrative Stay of Federal Water Quality Criteria for Metals and Interim Final Rule, Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants; States' Compliance—Revision of Metals Criteria; 60 FR 22228, 22229, May 4, 1995 [the NTR, as amended]). The stay was in response to a lawsuit against EPA challenging, among other issues, metals criteria expressed as total recoverable concentrations. A partial Settlement Agreement required EPA to stay specific metals criteria in the NTR. EPA then promulgated certain metals criteria in the dissolved form through the use of conversion factors. These factors are listed in the NTR, as amended. A scientific discussion of these criteria is found in a subsequent section of this preamble.

Since certain criteria have already been promulgated for specific water bodies in the State of California in the NTR, as amended, they are not within the scope of today's final rule. However, for clarity in reading a comprehensive rule for the State of California, these criteria are incorporated into 40 CFR 131.38(d)(2). Footnotes to the Table in 40 CFR 131.38(b)(1) and 40 CFR 131.38(d)(3) clarify which criteria (and for which specific water bodies) were promulgated by the NTR, as amended, and are therefore excluded from this final rule. The appropriate (freshwater or saltwater) aquatic life criteria which were promulgated in the NTR, as amended, for all inland surface waters and enclosed bays and estuaries include: chromium III and cyanide. The appropriate (water and organism or organism only) human health criteria which were promulgated in the NTR, as amended, for all inland surface waters and enclosed bays and estuaries include:

antimony
thallium
asbestos
acrolein
acrylonitrile
carbon tetrachloride
chlorobenzene
1,2-dichloroethane
1,1-dichloroethylene
1,3-dichloropropylene
ethylbenzene
1,1,2,2-tetrachloroethane
tetrachloroethylene
1,1,2-trichloroethane
trichloroethylene
vinyl chloride
2,4-dichlorophenol
2-methyl-4,6-dinitrophenol
2,4-dinitrophenol
benzidine
bis(2-chloroethyl)ether
bis(2-ethylhexyl)phthalate
3,3-dichlorobenzidine
diethyl phthalate
dimethyl phthalate
di-n-butyl phthalate
2,4-dinitrotoluene
1,2-diphenylhydrazine
hexachlorobutadiene
hexachlorocyclopentadiene
hexachloroethane
isophorone
nitrobenzene
n-nitrosodimethylamine
n-nitrosodiphenylamine

Other pollutant criteria were promulgated in the NTR, as amended, for specific water bodies, but not all inland surface waters and enclosed bays and estuaries.

3. Status of Implementation of CWA Section 303(c)(2)(B)

Shortly after the SWRCB adopted the ISWP and EBEP, several dischargers filed suit against the State alleging that it had not adopted the two plans in compliance with State law. The plaintiffs in a consolidated case included: the County of Sacramento, Sacramento County Water Agency; Sacramento Regional County Sanitation District; the City of Sacramento; the City of Sunnyvale; the City of San Jose; the City of Stockton; and Simpson Paper Company.

The dischargers alleged that the State had not adopted the ISWP and EBEP in compliance with the California Administrative Procedures Act (Gov Code. Section 11340, *et seq.*), the California Environmental Quality Act (Pub. Re Code, Section 21000, *et seq.*), and the Porter-Cologne Act (Wat. Code, Section 13200, *et seq.*). The allegation that the State did not sufficiently consider economics when adopting water quality objectives, as allegedly required by Section 13241 of the Porter Cologne Act, was an important issue in the litigation.

In October of 1993, the Superior Court of California, County of Sacramento, issued a tentative decision in favor of the dischargers. In March of 1994, the Court issued a substantively similar final decision in favor of the dischargers. Final judgments from the Court in July of 1994 ordered the SWRCB to rescind the ISWP and EBEP. On September 22, 1994, the SWRCB formally rescinded the two statewide water quality control plans. The State is currently in the process of readopting water quality control plans for inland surface waters, enclosed bays and estuaries.

CWA section 303(c)(2)(B) was fully implemented in the State of California from December of 1992, when the NTR was promulgated, until September of 1994, when the SWRCB was required to rescind the ISWP and EBEP. The provisions for California in EPA's NTR together with the approved portions of

California's ISWP and EBEP implemented the requirements of CWA section 303(c)(2)(B). However, since September of 1994, when the SWRCB rescinded the ISWP and EBEP, the requirements of section 303(c)(2)(B) have not been fully implemented in California.

The scope of today's rule is to re-establish criteria for the remaining priority toxic pollutants to meet the requirements of section 303(c)(2)(B) of the CWA. Pursuant to section 303(c)(4), the Administrator has determined that it is necessary to include in today's action criteria for priority toxic pollutants, which are not covered by the NTR, as amended, or by the State through EPA-approved site-specific criteria, for waters of the United States in the State of California.

4. State-Adopted, Site-Specific Criteria for Priority Toxic Pollutants

The State has the discretion to develop site-specific criteria when appropriate e.g., when statewide criteria appear over-or under-protective of designated uses. Periodically, the State through its RWQCBs will adopt site-specific criteria for priority toxic pollutants within respective Basin Plans. These criteria are intended to be effective throughout the Basin or throughout a designated water body. Under California law, these criteria must be publicly reviewed and approved by the RWQCB, the SWRCB, and the State's Office of Administrative Law (OAL). Once this adoption process is complete, the criteria become State law.

These criteria must be submitted to the EPA Regional Administrator for review and approval under CWA section 303. These criteria are usually submitted to EPA as part of a RWQCB Basin Plan Amendment, after the Amendment has been adopted under the State's process and has become State law.

a. State-Adopted Site-Specific Criteria Under EPA Review

The State of California has recently reviewed and updated all of its RWQCB Basin Plans. All of the Basin Plans have completed the State review and adoption process and have been submitted to EPA for review and approval. Some of the Basin Plans contain site-specific criteria. In these cases, the State-adopted site-specific criteria are used for water quality programs.

EPA has not yet concluded consultation under the Endangered Species Act with the U.S. Department of Interior, Fish and Wildlife Service, and the U.S. Department of Commerce, National Marine Fisheries Service, on EPA's tentative approval/disapproval actions on the RWQCB Basin Plans. In this situation, the more stringent of the two criteria (the State-adopted site-specific criteria in the RWQCB Basin Plans, or the Federal criteria in this final rule), would be used for water quality programs including the calculation of water quality-based effluent criteria in National Pollutant Discharge Elimination System (NPDES) permits.

b. State-Adopted Site-Specific Criteria With EPA Approval

In several cases, the EPA Regional Administrator has already reviewed and approved State-adopted site-specific criteria within the State of California. Several of these cases are discussed in this section. All of the EPA approval letters referenced in today's preamble are contained in the administrative record for today's rule.

Sacramento River: EPA has approved site-specific acute criteria for copper, cadmium and zinc in the Sacramento River, upstream of Hamilton City, in the Central Valley Region (RWQCB for the Central Valley Region) of the State of California. EPA approved these site-specific criteria by letter dated August 7, 1985. Specifically, EPA approved for the Sacramento River (and tributaries) above Hamilton City, a copper criterion of 5.6 µg/l (maximum), a zinc criterion of 16 µg/l (maximum) and a cadmium criterion of 0.22 µg/l (maximum), all in the dissolved form using a hardness of 40 mg/l as CaCO3. (These criteria were actually adopted by the State and approved by EPA as equations which vary with hardness.) These "maximum" criteria correspond to acute criteria in today's final rule. Therefore, Federal acute criteria for copper, cadmium, and zinc for the Sacramento River (and tributaries) above Hamilton City are not necessary to protect the designated uses and are not included in the final rule. However, the EPA Administrator is making a finding that it is necessary to include chronic criteria for copper, cadmium and zinc for the Sacramento River (and tributaries) above Hamilton City, as part of the statewide criteria promulgated in today's final rule.

San Joaquin River: The selenium criteria in this rule are not applicable to portions of the San Joaquin River, in the Central Valley Region, because selenium criteria have been either previously approved by EPA or previously promulgated by EPA as part of the NTR. EPA approved and disapproved State-adopted site-specific selenium criteria in portions of the San Joaquin River, in the Central Valley Region of the State of California (RWQCB for the Central Valley Region). EPA's determination on these site-specific criteria is contained in a letter dated April 13, 1990.

Specifically, EPA approved for the San Joaquin River, mouth of Merced River to Vernalis, an aquatic life selenium criterion of 12 µg/l (maximum with the understanding that the instantaneous maximum concentration may not exceed the objective more than once every three years). Today's final rule does not affect this Federally-approved, State-adopted site-specific acute criterion, and it remains in effect for the San Joaquin River, mouth of Merced River to Vernalis. Therefore, an acute criterion for selenium in the San Joaquin River, mouth of Merced River to Vernalis is not necessary to protect the designated use and thus is not included in this final rule.

By letter dated April 13, 1990, EPA also approved for the San Joaquin River, mouth of Merced River to Vernalis, a State-adopted site-specific aquatic life selenium criterion of 5 µg/l (monthly mean); however, EPA disapproved a State-adopted site-specific selenium criterion of 8 µg/l (monthly mean—critical year only) for these waters. Subsequently, EPA promulgated a chronic selenium criterion of 5 µg/l (4 day average) for waters of the San Joaquin River from the mouth of the Merced River to Vernalis in the NTR. This chronic criterion applies to all water quality programs concerning the San Joaquin River, mouth of Merced River to Vernalis. Today's final rule does not affect the Federally-promulgated chronic selenium criterion of 5 µg/l (4 day average) set forth in the NTR. This previously Federally-promulgated criterion remains in effect for the San Joaquin River, mouth of Merced River to Vernalis.

Grassland Water District, San Luis National Wildlife Refuge, and Los Banos State Wildlife Refuge: EPA approved for the Grassland Water District, San Luis National Wildlife Refuge, and Los Banos State Wildlife Refuge, a State-adopted site-specific aquatic life selenium criterion of 2 µg/l (monthly mean) by letter dated April 13, 1990. This Federally-approved, State-adopted site-specific chronic criterion remains in effect for the Grassland Water District, San Luis National Wildlife Refuge and Los Banos State Wildlife Refuge. Therefore it is not necessary to include in today's final rule, a chronic criterion for selenium for the Grassland Water District, San Luis National Wildlife Refuge and Los Banos State Wildlife Refuge, and thus, it is not included in this final rule.

San Francisco Regional Board Basin Plan of 1986: EPA approved several priority toxic pollutant objectives (CWA criteria) that were contained in the1986 San Francisco Regional Board Basin Plan, as amended by SWRCB Resolution Numbers 87–49, 87–82 and 87–92, by letters dated September 2, 1987 and December 24, 1987. This Basin Plan, the SWRCB Resolutions, and the EPA approval letters are contained in the administrative record for this rulemaking. It is not necessary to include these criteria for priority toxic pollutants that are contained in the San Francisco Regional Board's 1986 Basin Plan as amended, and approved by EPA. Priority pollutants in this situation are footnoted in the matrix at 131.38(b)(1) with footnote "b." Where gaps exist in the State adoption and EPA approval of priority toxic pollutant objectives, the criteria in today's rule apply.

EPA is assigning "human health, water and organism consumption" criteria to waters with the States' municipal or "MUN" beneficial use designation in the Basin Plan. Also, some pollutants regulated through the Basin Plan have different averaging periods, *e.g.*, one hour as compared with the rule's "short-term." However, where classes of chemicals, such as polynuclear aromatic hydrocarbons, or PAHs, and phenols, are regulated through the Basin Plan, but not specific chemicals within the category, specific chemicals within the category are regulated by today's rule.

E. Rationale and Approach for Developing the Final Rule

This section explains EPA's legal basis for today's final rule, and discusses EPA's general approach for developing the specific requirements for the State of California.

1. Legal Basis

CWA section 303(c) specifies that adoption of water quality standards is primarily the responsibility of the States. However, CWA section 303(c) also describes a role for the Federal government to oversee State actions to ensure compliance with CWA requirements. If EPA's review of the States' standards finds flaws or omissions, then the CWA authorizes EPA to correct the deficiencies (see CWA section 303(c)(4)). This water quality standards promulgation authority has been used by EPA to issue final rules on several separate occasions, including the NTR, as amended, which promulgated criteria similar to those included here for a number of States. These actions have addressed both insufficiently protective State criteria and/or designated uses and failure to adopt needed criteria. Thus, today's action is not unique.

The CWA in section 303(c)(4) provides two bases for promulgation of Federal water quality standards. The first basis, in paragraph (A), applies when a State submits new or revised standards that EPA determines are not consistent with the applicable requirements of the CWA. If, after EPA's disapproval, the State does not amend its rules so as to be consistent with the CWA, EPA is to promptly propose appropriate Federal water quality standards for that State. The second basis for an EPA action is in paragraph (B), which provides that EPA shall promptly initiate promulgation "* * * in any case where the Administrator determines that a revised or new standard is necessary to meet the requirements of this Act." EPA is using section 303(c)(4)(B) as the legal basis for today's final rule.

As discussed in the preamble to the NTR, the Administrator's determination under CWA section 303(c)(4) that criteria are necessary to meet the requirements of the Act could be supported in several ways. Consistent with EPA's approach in the NTR, EPA interprets section 303(c)(2)(B) of the CWA to allow EPA to act where the State has not succeeded in establishing numeric water quality standards for toxic pollutants. This inaction can be the basis for the Administrator's determination under section 303(c)(4) that new or revised criteria are necessary to ensure designated uses are protected.

EPA does not believe that it is necessary to support the criteria in today's rule on a pollutant-specific, water body-by-water-body basis. For EPA to undertake an effort to conduct research and studies of each stream segment or water body across the State of California to demonstrate that for each toxic pollutant for which EPA has issued CWA section 304(a) criteria guidance there is a "discharge or presence" of that pollutant which could reasonably "be expected to interfere with" the designated use would impose an enormous administrative burden and would be contrary to the statutory directive for swift action manifested by the 1987 addition of section 303(c)(2)(B) to the CWA. Moreover, because these criteria are ambient criteria that define attainment of the designated uses, their application to all water bodies will result in additional controls on dischargers only where necessary to protect the designated uses.

EPA's interpretation of section 303(c)(2)(B) is supported by the language of the provision, the statutory framework and purpose of section 303, and the legislative history. In adding section 303(c)(2)(B) to the CWA, Congress understood the existing requirements in section 303(c)(1) for States to conduct triennial reviews of their water quality standards and submit the results of those reviews to EPA and in section 303(c)(4)(B) for promulgation. CWA section 303(c) includes numerous deadlines and section 303(c)(4) directs the Administrator to act "promptly" where the Administrator determines that a revised or new standard is necessary to meet the requirements of the Act. Congress, by linking section 303(c)(2)(B) to the section 303(c)(1) three-year review period, gave States a last chance to correct this deficiency on their own. The legislative history of the provision demonstrates that chief Senate sponsors, including Senators Stafford, Chaffee and others wanted the provision to eliminate State and EPA delays and force quick action. Thus, to interpret CWA section 303(c)(2)(B) and (c)(4) to require such a cumbersome pollutant specific effort on each stream segment would essentially render section 303(c)(2)(B) meaningless. The provision and its legislative background indicate that the Administrator's determination to invoke section 303(c)(4)(B) authority can be met by the Administrator making a generic finding of inaction by the State without the need to develop pollutant specific data for individual stream segments. Finally, the reference in section 303(c)(2)(B) to section 304(a) criteria suggests that section 304(a) criteria serve as default criteria; that once EPA has issued them, States were to adopt numeric criteria for those pollutants based on the 304(a) criteria, unless they had other scientifically defensible criteria. EPA also notes that this rule follows the approach EPA took nationally in promulgating the NTR for States that failed to comply with CWA section 303(c)(2)(B). 57 FR 60848, December 22, 1992. EPA incorporates the discussion in the NTR preamble as part of this rulemaking record.

This determination is supported by information in the rulemaking record showing the discharge or presence of priority toxic pollutants throughout the State. While this data is not necessarily complete, it constitutes a strong record supporting the need for numeric criteria for priority toxic pollutants with section 304(a) criteria guidance where the State does not have numeric criteria.

Today's final rule would not impose any undue or inappropriate burden on the State of California or its dischargers. It merely puts in place numeric criteria

for toxic pollutants that are already used in other States in implementing CWA programs. Under this rulemaking, the State of California retains the ability to adopt alternative water quality criteria simply by completing its criteria adoption process. Upon EPA approval of those criteria, EPA will initiate action to stay the Federally-promulgated criteria and subsequently withdraw them.

2. Approach for Developing This Rule

In summary, EPA developed the criteria promulgated in today's final rule as follows. Where EPA promulgated criteria for California in the NTR, EPA has not acted to amend the criteria in the NTR. Where criteria for California were not included in the NTR, EPA used section 304(a) National criteria guidance documents as a starting point for the criteria promulgated in this rule. EPA then determined whether new information since the development of the national criteria guidance documents warranted any changes. New information came primarily from two sources. For human health criteria, new or revised risk reference doses and cancer potency factors on EPA's Integrated Risk Information System (IRIS) as of October 1996 form the basis for criteria values (see also 63 FR 68354). For aquatic life criteria, updated data sets resulting in revised criteria maximum concentrations (CMCs) and criteria continuous concentrations (CCCs) formed the basis for differences from the national criteria guidance documents. Both of these types of changes are discussed in more detail in the following sections. This revised information was used to develop the water quality criteria promulgated here for the State of California.

F. Derivation of Criteria

1. Section 304(a) Criteria Guidance Process

Under CWA section 304(a), EPA has developed methodologies and specific criteria guidance to protect aquatic life and human health. These methodologies are intended to provide protection for all surface waters on a national basis. The methodologies have been subject to public review, as have the individual criteria guidance documents. Additionally, the methodologies have been reviewed by EPA's Science Advisory Board (SAB) of external experts.

EPA has included in the record of this rule the aquatic life methodology as described in "Appendix B—Guidelines for Deriving Water Quality Criteria for the Protection of Aquatic Life and Its Uses" to the "Water Quality Criteria Documents; Availability" (45 FR 79341, November 28, 1980) as amended by the "Summary of Revisions to Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses" (50 FR 30792, July 29, 1985). (Note: Throughout the remainder of this preamble, this reference is described as the 1985 Guidelines. Any page number references are to the actual guidance document, not the notice of availability in the Federal Register. A copy of the 1985 Guidelines is available through the National Technical Information Service (PB85–227049), is in the administrative record for this rule, and is abstracted in Appendix A of *Quality Criteria for Water*, 1986.) EPA has also included in the administrative record of this rule the human health methodology as described in "Appendix C—Guidelines and Methodology Used in the Preparation of Health Effects Assessment Chapters of the Consent Decree Water Criteria Documents" (45 FR 79347, November 28, 1980). (Note: Throughout the remainder of this preamble, this reference is described as the Human Health Guidelines or the 1980 Guidelines.) EPA also recommends that the following be reviewed: "Appendix D—Response to Comments on Guidelines for Deriving Water Quality Criteria for the Protection of Aquatic Life and Its Uses," (45 FR 79357, November 28, 1980); "Appendix E—Responses to Public Comments on the Human Health Effects Methodology for Deriving Ambient Water Quality Criteria" (45 FR 79368, November 28, 1980); and "Appendix B—Response to Comments on Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses" (50 FR 30793, July 29, 1985). EPA placed into the administrative record for this rulemaking the most current individual criteria guidance for the priority toxic pollutants included in today's rule. (Note: All references to appendices are to the associated Federal Register publication.)

EPA received many comments related to the issue of what criteria should apply in the CTR if the CWA section 304(a) criteria guidance is undergoing re-evaluation, or if new data are developed that may affect a recommended criterion. As science is always evolving, EPA is faced with the challenge of promulgating criteria that reflect the best science and sound science. EPA addressed this challenge in some detail in its Federal Register notice that contained the Agency's current section 304(a) criteria guidance (63 FR 68335, December 10, 1998). There, EPA articulated its policy, reiterated here, that the existing criteria guidance represent the Agency's best assessment until such time as EPA's re-evaluation of a criteria guidance value for a particular chemical is complete. The reason for this is that both EPA's human health criteria guidance and aquatic life criteria guidance are developed taking into account numerous variables. For example, for human health criteria guidance, EPA evaluates many diverse toxicity studies, whose results feed into a reference dose or cancer potency estimate that, along with a number of exposure factors and determination of risk level, results in a guidance criterion. For aquatic life, EPA evaluates many diverse aquatic toxicity studies to determine chronic and acute toxicity taking into account how other factors (such as pH, temperature or hardness) affect toxicity. EPA also, to the extent possible, addresses bioaccumulation or bioconcentration. EPA then uses this toxicity information along with exposure information to determine the guidance criterion. Importantly, EPA subjects such evaluation to peer review and/or public comment.

For these reasons, EPA generally does not make a change to the 304(a) criteria guidance based on a partial picture of the evolving science. This makes sense, because to address one piece of new data without looking at all relevant data is less efficient and results in regulatory impacts that may go back and forth, when in the end, the criteria guidance value does not change that much. Certain new changes, however, do warrant change in criteria guidance, such as a change in a value in EPA's Integrated Risk Information System (IRIS) because it represents the Agency consensus about human health impacts. These changes are sufficiently examined across the Agency such that EPA believes they can be incorporated into EPA's water quality criteria guidance. EPA has followed this approach in the CTR. Included in the administrative record for today's rule is a document entitled "Status of Clean Water Act Section 304(a) Criteria" which further explains EPA's policy on managing change to criteria guidance.

2. Aquatic Life Criteria

Aquatic life criteria may be expressed in numeric or narrative form. EPA's 1985 Guidelines describe an objective, internally consistent and appropriate way of deriving chemical-specific, numeric water quality criteria for the protection of the presence of, as well as

the uses of, both fresh and salt water aquatic organisms.

An aquatic life criterion derived using EPA's CWA section 304(a) method "might be thought of as an estimate of the highest concentration of a substance in water which does not present a significant risk to the aquatic organisms in the water and their uses." (45 FR 79341.) EPA's guidelines are designed to derive criteria that protect aquatic communities. EPA's 1985 Guidelines attempt to provide a reasonable and adequate amount of protection with only a small possibility of substantial overprotection or underprotection. As discussed in detail below, there are several individual factors which may make the criteria somewhat overprotective or underprotective. The approach EPA is using is believed to be as well balanced as possible, given the state of the science.

Numerical aquatic life criteria derived using EPA's 1985 Guidelines are expressed as short-term and long-term averages, rather than one number, in order that the criterion more accurately reflect toxicological and practical realities. The combination of a criterion maximum concentration (CMC), a short-term concentration limit, and a criterion continuous concentration (CCC), a four-day average concentration limit, are designed to provide protection of aquatic life and its uses from acute and chronic toxicity to animals and plants, without being as restrictive as a one-number criterion would have to be (1985 Guidelines, pages 4 & 5). The terms CMC and CCC are the formal names for the two (acute and chronic) values of a criterion for a pollutant; however, this document will also use the informal synonyms acute criterion and chronic criterion.

The two-number criteria are intended to identify average pollutant concentrations which will produce water quality generally suited to maintenance of aquatic life and designated uses while restricting the duration of excursions over the average so that total exposures will not cause unacceptable adverse effects. Merely specifying an average value over a time period may be insufficient unless the time period is short, because excursions higher than the average may kill or cause substantial damage in short periods.

A minimum data set of eight specified families is recommended for criteria development (details are given in the 1985 Guidelines, page 22). The eight specific families are intended to be representative of a wide spectrum of aquatic life. For this reason it is not necessary that the specific organisms tested be actually present in the water body. EPA's application of its guidelines to develop the criteria matrix in this rule is judged by the Agency to be appropriate for all waters of the United States (U.S.), and to all ecosystems (1985 Guidelines, page 4) including those waters of the U.S. and ecosystems in the State of California.

Fresh water and salt water (including both estuarine and marine waters) have different chemical compositions, and freshwater and saltwater species often do not inhabit the same water. To provide additional accuracy, criteria are developed for fresh water and for salt water.

For this rule, EPA updated freshwater aquatic life criteria contained in CWA section 304(a) criteria guidance first published in the early 1980's and later modified in the NTR, as amended, for the following ten pollutants: arsenic, cadmium, chromium (VI), copper, dieldrin, endrin, lindane (gamma BHC), nickel, pentachlorophenol, and zinc. The updates used as the basis for this rule are explained in a technical support document entitled, *1995 Updates: Water Quality Criteria Documents for the Protection of Aquatic Life in Ambient Water* (U.S. EPA–820–B–96–001, September 1996), available in the administrative record to this rulemaking; this document presents the derivation of each of the final CMCs and CCCs and the toxicity studies from which the updated freshwater criteria for the ten pollutants were derived.

The polychlorinated biphenyls (PCB) criteria in the criteria matrix for this rule differs from that in the NTR, as amended; for this rule, the criteria are expressed as the sum of seven aroclors, while for the NTR, as amended, the criteria are expressed for each of seven aroclors. The aquatic life criteria for PCBs in the CTR are based on the criteria contained in the 1980 criteria guidance document for PCBs which is included in the administrative record for this rule. This criteria document explains the derivation of aquatic life criteria based on total PCBs. For more information see the Response to Comments document for this rule. Today's chronic aquatic life criteria for PCBs are based on a final residue value (FRV). In EPA's guidelines for deriving aquatic life criteria, an FRV-based criterion is intended to prevent concentrations of pollutants in commercially or recreationally important aquatic species from affecting the marketability of those species or affecting the wildlife that consume aquatic life.

The proposed CTR included an updated freshwater and saltwater aquatic life criteria for mercury. In today's final rule, EPA has reserved the mercury criteria for freshwater and saltwater aquatic life, but is promulgating human health criteria for mercury for all surface waters in California. In some instances, the human health mercury criteria included in today's final rule may not protect some aquatic species or threatened or endangered species. In such instances, more stringent mercury limits may be determined and implemented through use of the State's narrative criterion. The reasons for reserving the mercury aquatic life numbers are explained in further detail in Section L, Endangered Species Act.

a. Freshwater Acute Selenium Criterion

EPA proposed a different freshwater acute aquatic life criterion for selenium for this rule than was promulgated in the NTR, as amended. EPA's proposed action was consistent with EPA's proposed selenium criterion maximum concentration for the Water Quality Guidance for the Great Lakes System (61 FR 58444, November 14, 1996). This proposal took into account data showing that selenium's two most prevalent oxidation states, selenite and selenate, present differing potentials for aquatic toxicity, as well as new data which indicated that various forms of selenium are additive. Additivity increases the toxicity of mixtures of different forms of the pollutant. The proposed approach produces a different selenium acute criterion concentration, or CMC, depending upon the relative proportions of selenite, selenate, and other forms of selenium that are present.

The preamble to the August 5, 1997, proposed rule provided a lengthy discussion of this proposed criterion for the State of California. See 62 FR 42160–42208. EPA incorporates that discussion here as part of this rulemaking record. In 1996, a similar discussion was included in the proposed rule for the Great Lakes System. Commenters questioned several aspects of the Great Lakes proposal. EPA is continuing to respond to those comments, and to follow up with additional literature review and toxicity testing. In addition, the U.S. FWS and U.S. NMFS (collectively, the Services) are concerned that EPA's proposed criterion may not be sufficiently protective of certain threatened and endangered species in California. Because the Services believe there is a lack of data to show for certain that the proposed criterion would not affect threatened and endangered species, the Services prefer that EPA further investigate the protectiveness of the

criterion before finalizing the proposed criterion. Therefore, EPA is not promulgating a final acute freshwater selenium criterion at this time.

b. Dissolved Metals Criteria

In December of 1992, in the NTR, EPA promulgated water quality criteria for several States that had failed to meet the requirements of CWA section 303(c)(2)(B). Included among the water quality criteria promulgated were numeric criteria for the protection of aquatic life for 11 metals: arsenic, cadmium, chromium (III), chromium (VI), copper, lead, mercury, nickel, selenium, silver and zinc. Criteria for two metals applied to the State of California: chromium III and selenium.

The Agency received extensive public comment during the development of the NTR regarding the most appropriate approach for expressing the aquatic life metals criteria. The principal issue was the correlation between metals that are measured and metals that are bioavailable and toxic to aquatic life. It is now the Agency's policy that the use of dissolved metal to set and measure compliance with aquatic life water quality standards is the recommended approach, because dissolved metal more closely approximates the bioavailable fraction of the metal in the water column than does total recoverable metal.

Since EPA's previous aquatic life criteria guidance had been expressed as total recoverable metal, to express the criteria as dissolved, conversion factors were developed to account for the possible presence of particulate metal in the laboratory toxicity tests used to develop the total recoverable criteria. EPA included a set of recommended freshwater conversion factors with its Metals Policy (see Office of Water Policy and Technical Guidance on Interpretation and Implementation of Aquatic Life Metals Criteria, Martha G. Prothro, Acting Assistant Administrator for Water, October 1, 1993). Based on additional laboratory evaluations that simulated the original toxicity tests, EPA refined the procedures used to develop freshwater conversion factors for aquatic life criteria. These new conversion factors were made available for public review and comment in the amendments to the NTR on May 4, 1995, at 60 FR 22229. They are also contained in today's rule at 40 CFR 131.38(b)(2).

The preamble to the August 5, 1997, proposed rule provided a more detailed discussion of EPA's metals policy concerning the aquatic life water quality criteria for the State of California. See 62 FR 42160–42208. EPA incorporates that discussion here as part of this rulemaking record. Many commenters strongly supported the Agency's policy on dissolved metals aquatic life criteria. A few commenters expressed an opinion that the metals policy may not provide criteria that are adequately protective of aquatic or other species. Responses to those comments are contained in a memo to the CTR record entitled "Discussion of the Use of Dissolved Metals in the CTR" (February 1, 2000, Jeanette Wiltse) and EPA's response to comments document which are both contained in the administrative record for the final rule.

Calculation of Aquatic Life Dissolved Metals Criteria: Metals criteria values for aquatic life in today's rule in the matrix at 131.38(b)(1) are shown as dissolved metal. These criteria have been calculated in one of two ways. For freshwater metals criteria that are hardness-dependent, the metals criteria value is calculated separately for each hardness using the table at 40 CFR 131.38(b)(2). (The hardness-dependent freshwater values presented in the matrix at 40 CFR 131.38(b)(1) have been calculated using a hardness of 100 mg/l as CaCO3 for illustrative purposes only.) The hardness-dependent criteria are then multiplied by the appropriate conversion factors in the table at 40 CFR 131.38(b)(2). Saltwater and freshwater metals criteria that are not hardness-dependent are calculated by taking the total recoverable criteria values (from EPA's national section 304(a) criteria guidance, as updated and described in section F.2.a.) before rounding, and multiplying them by the appropriate conversion factors. The final dissolved metals criteria values, as they appear in the matrix at 40 CFR 131.38(b)(1), are rounded to two significant figures.

Translators for Dissolved to Total Recoverable Metals Limits: EPA's National Pollutant Discharge Elimination System (NPDES) regulations require that limits for metals in permits be stated as total recoverable in most cases (see 40 CFR 122.45(c)) except when an effluent guideline specifies the limitation in another form of the metal, the approved analytical methods measure only dissolved metal, or the permit writer expresses a metal's limit in another form (*e.g.*, dissolved, specific valence, or total) when required to carry out provisions of the CWA. This is because the chemical conditions in ambient waters frequently differ substantially from those in the effluent and these differences result in changes in the partitioning between dissolved and absorbed forms of the metal. This means that if effluent limits were expressed in the dissolved form, additional particulate metal could dissolve in the receiving water causing the criteria to be exceeded. Expressing criteria as dissolved metal requires translation between different metal forms in the calculation of the permit limit so that a total recoverable permit limit can be established that will achieve water quality standards. Thus, it is important that permitting authorities and other authorities have the ability to translate between dissolved metal in ambient waters and total recoverable metal in effluent.

EPA has completed guidance on the use of translators to convert from dissolved metals criteria to total recoverable permit limits. The document, *The Metals Translator: Guidance for Calculating a Total Recoverable Permit Limit From a Dissolved Criterion* (EPA 823–B–96–007, June 1996), is included in the administrative record for today's rule. This technical guidance examines how to develop a metals translator which is defined as the fraction of total recoverable metal in the downstream water that is dissolved, *i.e.*, the dissolved metal concentration divided by the total recoverable metal concentration. A translator may take one of three forms: (1) It may be assumed to be equivalent to the criteria guidance conversion factors; (2) it may be developed directly as the ratio of dissolved to total recoverable metal; and (3) it may be developed through the use of a partition coefficient that is functionally related to the number of metal binding sites on the adsorbent in the water column (*e.g.*, concentrations of total suspended solids or TSS). This guidance document discusses these three forms of translators, as well as field study designs, data generation and analysis, and site-specific study plans to generate site-specific translators.

California Regional Water Quality Control Boards may use any of these methods in developing water quality-based permit limits to meet water quality standards based on dissolved metals criteria. EPA encourages the State to adopt a statewide policy on the use of translators so that the most appropriate method or methods are used consistently within California.

c. Application of Metals Criteria

In selecting an approach for implementing the metals criteria, the principal issue is the correlation between metals that are measured and metals that are biologically available and toxic. In order to assure that the metals criteria are appropriate for the chemical conditions under which they are applied, EPA is providing for the

adjustment of the criteria through application of the "water-effect ratio" procedure. EPA notes that performing the testing to use a site-specific water-effect ratio is optional on the part of the State.

In the NTR, as amended, EPA identified the water-effect ratio (WER) procedure as a method for optional site-specific criteria development for certain metals. The WER approach compares bioavailability and toxicity of a specific pollutant in receiving waters and in laboratory waters. A WER is an appropriate measure of the toxicity of a material obtained in a site water divided by the same measure of the toxicity of the same material obtained simultaneously in a laboratory dilution water.

On February 22, 1994, EPA issued *Interim Guidance on the Determination and Use of the Water-Effect Ratios for Metals* (EPA 823-B–94–001) now incorporated into the updated Second Edition of the Water Quality Standards Handbook, Appendix L. A copy of the Handbook is contained in the administrative record for today's rule. In accordance with the WER guidance and where application of the WER is deemed appropriate, EPA strongly encourages the application of the WER on a watershed or water body basis as part of a water quality criteria in California as opposed to the application on a discharger-by-discharger basis through individual NPDES permits. This approach is technically sound and an efficient use of resources. However, discharger specific WERs for individual NPDES permit limits are possible and potentially efficient where the NPDES discharger is the only point source discharger to a specific water body.

The rule requires a default WER value of 1.0 which will be assumed, if no site-specific WER is determined. To use a WER other than the default of 1.0, the rule requires that the WER must be determined as set forth in EPA's WER guidance or by another scientifically defensible method that has been adopted by the State as part of its water quality standards program and approved by EPA.

The WER is a more comprehensive mechanism for addressing bioavailability issues than simply expressing the criteria in terms of dissolved metal. Consequently, expressing the criteria in terms of dissolved metal, as done in today's rule for California, does not completely eliminate the utility of the WER. This is particularly true for copper, a metal that forms reduced-toxicity complexes with dissolved organic matter.

The *Interim Guidance on Determination and Use of Water-Effect Ratios for Metals* explains the relationship between WERs for dissolved criteria and WERs for total recoverable criteria. Dissolved measurements are to be used in the site-specific toxicity testing underlying the WERs for dissolved criteria. Because WERs for dissolved criteria generally are little affected by elevated particulate concentrations, EPA expects those WERs to be somewhat less than WERs for total recoverable criteria in such situations. Nevertheless, after the site-specific ratio of dissolved to total metal has been taken into account, EPA expects a permit limit derived using a WER for a dissolved criterion to be similar to the permit limit that would be derived from the WER for the corresponding total recoverable criterion.

d. Saltwater Copper Criteria

The saltwater copper criteria for aquatic life in today's rule are 4.8 µg/l (CMC) and 3.1 µg/l (CCC) in the dissolved form. These criteria reflect new data including data collected from studies for the New York/New Jersey Harbor and the San Francisco Bay indicating a need to revise the former copper 304(a) criteria guidance document to reflect a change in the saltwater CMC and CCC aquatic life values. These data also reflect a comprehensive literature search resulting in added toxicity test data for seven new species to the database for the saltwater copper criteria. EPA believes these new data have national implications and the national criteria guidance now contains a CMC of 4.8 µg/l dissolved and a CCC of 3.1 µg/l dissolved. In the amendments to the NTR, EPA noticed the availability of data to support these changes to the NTR, and solicited comments. The data can be found in the draft document entitled, *Ambient Water Quality Criteria—Copper, Addendum 1995*. This document is available from the Office of Water Resource Center and is available for review in the administrative record for today's rule.

e. Chronic Averaging Period

In establishing water quality criteria, EPA generally recommends an "averaging period" which reflects the duration of exposure required to elicit effects in individual organisms (TSD, Appendix D–2). The criteria continuous concentration, or CCC, is intended to be the highest concentration that could be maintained indefinitely in a water body without causing an unacceptable effect on the aquatic community or its uses (TSD, Appendix D–1). As aquatic organisms do not generally experience steady exposure, but rather fluctuating exposures to pollutants, and because aquatic organisms can generally tolerate higher concentrations of pollutants over a shorter periods of time, EPA expects that the concentration of a pollutant can exceed the CCC without causing an unacceptable effect if (a) the magnitude and duration of exceedences are appropriately limited and (b) there are compensating periods of time during which the concentration is below the CCC. This is done by specifying a duration of an "averaging period" over which the average concentration should not exceed the CCC more often than specified by the frequency (TSD, Appendix D–1).

EPA is promulgating a 4-day averaging period for chronic criteria, which means that measured or predicted ambient pollutant concentrations should be averaged over a 4-day period to determine attainment of chronic criteria. The State may apply to EPA for approval of an alternative averaging period. To do so, the State must submit to EPA the basis for such alternative averaging period.

The most important consideration for setting an appropriate averaging period is the length of time that sensitive organisms can tolerate exposure to a pollutant at levels exceeding a criterion without showing adverse effects on survival, growth, or reproduction. EPA believes that the chronic averaging period must be shorter than the duration of the chronic tests on which the CCC is based, since, in some cases, effects are elicited before exposure of the entire duration. Most of the toxicity tests used to establish the chronic criteria are conducted using steady exposure to toxicants for a least 28 days (TSD, page 35). Some chronic tests, however, are much shorter than this (TSD, Appendix D–2). EPA selected the 4-day averaging period based on the shortest duration in which chronic test effects are sometimes observed for certain species and toxicants. In addition, EPA believes that the results of some chronic tests are due to an acute effect on a sensitive life stage that occurs some time during the test, rather than being caused by long-term stress or long-term accumulation of the test material in the organisms.

Additional discussion of the rationale for the 4-day averaging period is contained in Appendix D of the TSD. Balancing all of the above factors and data, EPA believes that the 4-day averaging period falls within the scientifically reasonable range of values for choice of the averaging period, and is an appropriate length of time of

pollutant exposure to ensure protection of sensitive organisms.

EPA established a 4-day averaging period in the NTR. In settlement of litigation on the NTR, EPA stated that it was "in the midst of conducting, sponsoring, or planning research related to the basis for and application of" water quality criteria and mentioned the issue of averaging period. See Partial Settlement Agreement in *American Forest and Paper Ass'n, Inc. et al.* v. *U.S. EPA* (Consolidated Case No. 93–0694 (RMU), D.D.C.). EPA is re-evaluating issues raised about averaging periods and will, if appropriate, revise the 1985 Guidelines.

EPA received public comment relevant to the averaging period during the comment period for the 1995 Amendments to the NTR (60 FR 22228, May 4, 1995), although these public comments did not address the chronic averaging period separately from the allowable excursion frequency and the design flow. Comments recommended that EPA use the 30Q5 design flow for chronic criteria.

While EPA is undertaking analysis of the chronic design conditions as part of the revisions to the 1985 Guidelines, EPA has not yet completed this work. Until this work is complete, for the reasons set forth in the TSD, EPA continues to believe that the 4-day chronic averaging period represents a reasonable, defensible value for this parameter.

EPA added language to the final rule which will enable the State to adopt alternative averaging periods and frequencies and associated design flows where appropriate. The State may apply to EPA for approval of alternative averaging periods and frequencies and related design flows; the State must submit the bases for any changes. Before approving any change, EPA will publish for public comment, a notice proposing the changes.

f. Hardness

Freshwater aquatic life criteria for certain metals are expressed as a function of hardness because hardness and/or water quality characteristics that are usually correlated with hardness can reduce or increase the toxicities of some metals. Hardness is used as a surrogate for a number of water quality characteristics which affect the toxicity of metals in a variety of ways. Increasing hardness has the effect of decreasing the toxicity of metals. Water quality criteria to protect aquatic life may be calculated at different concentrations of hardnesses measured in milligrams per liter (mg/l) as calcium carbonate ($CaCO_3$).

Section 131.38(b)(2) of the final rule presents the hardness-dependent equations for freshwater metals criteria. For example, using the equation for zinc, the total recoverable CMCs at a hardness of 10, 50, 100 or 200 mg/l as $CaCO_3$ are 17, 67, 120 and 220 micrograms per liter (µg/l), respectively. Thus, the specific value in the table in the regulatory text is for illustrative purposes only. Most of the data used to develop these hardness equations for deriving aquatic life criteria for metals were in the range of 25 mg/l to 400 mg/l as $CaCO_3$, and the formulas are therefore most accurate in this range. The majority of surface waters nationwide and in California have a hardness of less than 400 mg/l as $CaCO_3$.

In the past, EPA generally recommended that 25 mg/l as $CaCO_3$ be used as a default hardness value in deriving freshwater aquatic life criteria for metals when the ambient (or actual) hardness value is below 25 mg/l as $CaCO_3$. However, use of the approach results in criteria that may not be fully protective. Therefore, for waters with a hardness of less than 25 mg/l as $CaCO_3$, criteria should be calculated using the actual ambient hardness of the surface water.

In the past, EPA generally recommended that if the hardness was over 400 mg/l, two options were available: (1) Calculate the criterion using a default WER of 1.0 and using a hardness of 400 mg/l in the hardness equation; or (2) calculate the criterion using a WER and the actual ambient hardness of the surface water in the equation. Use of the second option is expected to result in the level of protection intended in the 1985 Guidelines whereas use of the first option is thought to result in an even more protective aquatic life criterion. At high hardness there is an indication that hardness and related inorganic water quality characteristics do not have as much of an effect on toxicity of metals as they do at lower hardnesses. Related water quality characteristics do not correlate as well at higher hardnesses as they do at lower hardnesses. Therefore, if hardness is over 400 mg/l as $CaCO_3$, a hardness of 400 mg/l as $CaCO_3$ should be used with a default WER of 1.0; alternatively, the WER and actual hardness of the surface water may be used.

EPA requested comments in the NTR amendments on the use of actual ambient hardness for calculating criteria when the hardness is below 25 mg/l as $CaCO_3$, and when hardness is greater than 400 mg/l as $CaCO_3$. Most of the comments received were in favor of using the actual hardness with the use of the water-effect ratio (1.0 unless otherwise specified by the permitting authority) when the hardness is greater than 400 mg/l as $CaCO_3$. A few commenters did not want the water-effect ratio to be mandatory in calculating hardness, and other commenters had concerns about being responsible for deriving an appropriate water-effect ratio. Overall, the commenters were in favor of using the actual hardness when calculating hardness-dependent freshwater metals criteria for hardness between 0–400 mg/l as $CaCO_3$. EPA took those comments into account in promulgating today's rule.

A hardness equation is most accurate when the relationships between hardness and the other important inorganic constituents, notably alkalinity and pH, are nearly identical in all of the dilution waters used in the toxicity tests and in the surface waters to which the equation is to be applied. If an effluent raises hardness but not alkalinity and/or pH, using the hardness of the downstream water might provide a lower level of protection than intended by the 1985 guidelines. If it appears that an effluent causes hardness to be inconsistent with alkalinity and/or pH, the intended level of protection will usually be maintained or exceeded if either (1) data are available to demonstrate that alkalinity and/or pH do not affect the toxicity of the metal, or (2) the hardness used in the hardness equation is the hardness of upstream water that does not contain the effluent. The level of protection intended by the 1985 guidelines can also be provided by using the WER procedure.

In some cases, capping hardness at 400 mg/l might result in a level of protection that is higher than that intended by the 1985 guidelines, but any such increase in the level of protection can be overcome by use of the WER procedure. For metals whose criteria are expressed as hardness equations, use of the WER procedure will generally be intended to account for effects of such water quality characteristics as total organic carbon on the toxicities of metals. The WER procedure is equally useful for accounting for any deviation from a hardness equation in a site water.

3. Human Health Criteria

EPA's CWA section 304(a) human health criteria guidance provides criteria recommendations to minimize adverse human effects due to substances in ambient water. EPA's CWA section 304(a) criteria guidance for human health are based on two types of

toxicological endpoints: (1) carcinogenicity and (2) systemic toxicity (i.e., all other adverse effects other than cancer). Thus, there are two procedures for assessing these health effects: one for carcinogens and one for non-carcinogens.

If there are no data on how a chemical agent causes cancer, EPA's existing human health guidelines assume that carcinogenicity is a "non-threshold phenomenon," that is, there are no "safe" or "no-effect levels" because even extremely small doses are assumed to cause a finite increase in the incidence of the effect (i.e., cancer). Therefore, EPA's water quality criteria guidance for carcinogens are presented as pollutant concentrations corresponding to increases in the risk of developing cancer. See Human Health Guidelines at 45 FR 79347.

With existing criteria, pollutants that do not manifest any apparent carcinogenic effect in animal studies (i.e., systemic toxicants), EPA assumes that the pollutant has a threshold below which no effect will be observed. This assumption is based on the premise that a physiological mechanism exists within living organisms to avoid or overcome the adverse effect of the pollutant below the threshold concentration.

Note: Recent changes in the Agency's cancer guidelines addressing these assumptions are described in the Draft Water Quality Criteria Methodology: Human Health, 63 FR 43756, August 14, 1998.

The human health risks of a substance cannot be determined with any degree of confidence unless dose-response relationships are quantified. Therefore, a dose-response assessment is required before a criterion can be calculated. The dose-response assessment determines the quantitative relationships between the amount of exposure to a substance and the onset of toxic injury or disease. Data for determining dose-response relationships are typically derived from animal studies, or less frequently, from epidemiological studies in exposed populations.

The dose-response information needed for carcinogens is an estimate of the carcinogenic potency of the compound. Carcinogenic potency is defined here as a general term for a chemical's human cancer-causing potential. This term is often used loosely to refer to the more specific carcinogenic or cancer slope factor which is defined as an estimate of carcinogenic potency derived from animal studies or epidemiological data of human exposure. It is based on extrapolation from test exposures of high doses over relatively short periods of time to more realistic low doses over a lifetime exposure period by use of linear extrapolation models. The cancer slope factor, q1*, is EPA's estimate of carcinogenic potency and is intended to be a conservative upper bound estimate (e.g. 95% upper bound confidence limit).

For non-carcinogens, EPA uses the reference dose (RfD) as the dose-response parameter in calculating the criteria. For non-carcinogens, oral RfD assessments (hereinafter simply "RfDs") are developed based on pollutant concentrations that cause threshold effects. The RfD is an estimate (with uncertainty spanning perhaps an order of magnitude) of a daily exposure to the human population (including sensitive subgroups) that is likely to be without appreciable risk of deleterious effects during a lifetime. See Human Health Guidelines. The RfD was formerly referred to as an "Acceptable Daily Intake" or ADI. The RfD is useful as a reference point for gauging the potential effect of other doses. Doses that are less than the RfD are not likely to be associated with any health risks, and are therefore less likely to be of regulatory concern. As the frequency of exposures exceeding the RfD increases and as the size of the excess increases, the probability increases that adverse effect may be observed in a human population. Nonetheless, a clear conclusion cannot be categorically drawn that all doses below the RfD are "acceptable" and that all doses in excess of the RfD are "unacceptable." In extrapolating non-carcinogen animal test data to humans to derive an RfD, EPA divides either a No Observed-Adverse Effect Level (NOAEL), Lowest Observed Adverse Effect Level (LOAEL), or other benchmark dose observed in animal studies by an "uncertainty factor" which is based on professional judgment of toxicologists and typically ranges from 10 to 10,000.

For CWA section 304(a) human health criteria development, EPA typically considers only exposures to a pollutant that occur through the ingestion of water and contaminated fish and shellfish. Thus, the criteria are based on an assessment of risks related to the surface water exposure route only where designated uses are drinking water and fish and shellfish consumption.

The assumed exposure pathways in calculating the criteria are the consumption of 2 liters per day of water at the criteria concentration and the consumption of 6.5 grams per day of fish and shellfish contaminated at a level equal to the criteria concentration but multiplied by a "bioconcentration factor." The use of fish and shellfish consumption as an exposure factor requires the quantification of pollutant residues in the edible portions of the ingested species.

Bioconcentration factors (BCFs) are used to relate pollutant residues in aquatic organisms to the pollutant concentration in ambient waters. BCFs are quantified by various procedures depending on the lipid solubility of the pollutant. For lipid soluble pollutants, the average BCF is calculated from the weighted average percent lipids in the edible portions of fish and shellfish, which is about 3%; or it is calculated from theoretical considerations using the octanol/water partition coefficient. For non-lipid soluble compounds, the BCF is determined empirically. The assumed water consumption is taken from the National Academy of Sciences publication *Drinking Water and Health* (1977). (Referenced in the Human Health Guidelines.) This value is appropriate as it includes a margin of safety so that the general population is protected. See also EPA's discussion of the 2.0 liters/day assumption at 61 FR 65183 (Dec. 11, 1996). The 6.5 grams per day contaminated fish and shellfish consumption value was equivalent to the average per-capita consumption rate of all (contaminated and non-contaminated) freshwater and estuarine fish and shellfish for the U.S. population. See Human Health Guidelines.

EPA assumes in calculating water quality criteria that the exposed individual is an average adult with body weight of 70 kilograms. EPA assumes 6.5 grams per day of contaminated fish and shellfish consumption and 2.0 liters per day of contaminated drinking water consumption for a 70 kilogram person in calculating the criteria. Regarding issues concerning criteria development and differences in dose per kilogram of body weight, RfDs are always derived based on the most sensitive health effect endpoint. Therefore, when that basis is due to a chronic or lifetime health effect, the exposure parameters assume the exposed individual to be the average adult, as indicated above.

In the absence of this final rule, there may be particular risks to children. EPA believes that children are protected by the human health criteria contained in this final rule. Children are protected against other less sensitive adverse health endpoints due to the conservative way that the RfDs are derived. An RfD is a public health protective endpoint. It is an amount of a chemical that can be consumed on a daily basis for a lifetime without expecting an adverse effect. RfDs are based on sensitive health endpoints and

are calculated to be protective for sensitive human sub-populations including children. If the basis of the RfD was due to an acute or shorter-term developmental effect, EPA uses exposure parameters other than those indicated above. Specifically, EPA uses parameters most representative of the population of concern (*e.g.*, the health criteria for nitrates based on infant exposure parameters). For carcinogens, the risk assessments are upper bound one in a million (10^{-6}) lifetime risk numbers. The risk to children is not likely to exceed these upper bounds estimates and may be zero at low doses. The exposure assumptions for drinking water and fish protect children because they are conservative for infants and children. EPA assumes 2 liters of untreated surface water and 6.5 grams of freshwater and estuarine fish are consumed each day. EPA believes the adult fish consumption assumption is conservative for children because children generally consume marine fish not freshwater and estuarine.

EPA has a process to develop a scientific consensus on oral reference dose assessments and carcinogenicity assessments (hereinafter simply cancer slope factors or slope factors or q1*s). Through this process, EPA develops a consensus of Agency opinion which is then used throughout EPA in risk management decision-making. EPA maintains an electronic data base which contains the official Agency consensus for oral RfD assessments and carcinogenicity assessments which is known as the Integrated Risk Information System (IRIS). It is available for use by the public on the National Institutes of Health's National Library of Medicine's TOXNET system, and through diskettes from the National Technical Information Service (NTIS). (NTIS access number is PB 90–591330.)

Section 304(a)(1) of the CWA requires EPA to periodically revise its criteria guidance to reflect the latest scientific knowledge: "(A) On the kind and extent of all identifiable effects on health and welfare * * *; (B) on the concentration and dispersal of pollutants, or their byproducts, through biological, physical, and chemical processes; and (C) on the effects of pollutants on the biological community diversity, productivity, and stability, including information on the factors affecting eutrophication rates of organic and inorganic sedimentation for varying types of receiving waters." In developing up-to-date water quality criteria for the protection of human health, EPA uses the most recent IRIS values (RfDs and q1*s) as the toxicological basis in the criterion calculation. IRIS reflects EPA's most current consensus on the toxicological assessment for a chemical. In developing the criteria in today's rule, the IRIS values as of October 1996 were used together with currently accepted exposure parameters for bioconcentration, fish and shellfish and water consumption, and body weight. The IRIS cover sheet for each pollutant criteria included in today's rule is contained in the administrative record.

For the human health criteria included in today's rule, EPA used the Human Health Guidelines on which criteria recommendations from the appropriate CWA section 304(a) criteria guidance document were based. (These documents are also placed in the administrative record for today's rule.) Where EPA has changed any parameters in IRIS used in criteria derivation since issuance of the criteria guidance document, EPA recalculated the criteria recommendation with the latest IRIS information. Thus, there are differences between the original 1980 criteria guidance document recommendations, and those in this rule, but this rule presents EPA's most current CWA section 304(a) criteria recommendation. The basis (q1* or RfD) and BCF for each pollutant criterion in today's rule is contained in the rule's Administrative Record Matrix which is included in the administrative record for the rule. In addition, all recalculated human health numbers are denoted by an "a" in the criteria matrix in 40 CFR 131.38(b)(1) of the rule. The pollutants for which a revised human health criterion has been calculated since the December 1992 NTR include:

mercury
dichlorobromomethane
1,2-dichloropropane
1,2-trans-dichloroethylene
2,4-dimethylphenol
acenaphthene
benzo(a)anthracene
benzo(a)pyrene
benzo(b)flouranthene
benzo(k)flouranthene
2-chloronaphthalene
chrysene
dibenzo(a,h)anthracene
indeno(1,2,3-cd)pyrene
N-nitrosodi-n-propylamine
alpha-endosulfan
beta-endosulfan
endosulfan sulfate
2-chlorophenol
butylbenzyl phthalate
polychlorinated biphenyls.

In November of 1991, the proposed NTR presented criteria for several pollutants in parentheses. These were pollutants for which, in 1980, insufficient information existed to develop human health water quality criteria, but for which, in 1991, sufficient information existed. Since these criteria did not undergo the public review and comment in a manner similar to the other water quality criteria presented in the NTR (for which sufficient information was available in 1980 to develop a criterion, as presented in the 1980 criteria guidance documents), they were not proposed for adoption into the water quality criteria, but were presented to serve as notice for inclusion in future State triennial reviews. Today's rule promulgates criteria for these nine pollutants:

copper
1, 2-dichloropropane
1,2-trans-dichloroethylene
2,4-dimethylphenol
acenaphthene
2-chloronaphthalene
N-nitrosodi-n-propylamine
2-chlorophenol
butylbenzene phthalate

All the criteria are based on IRIS values—either an RfD or q1*—which were listed on IRIS as of November 1991, the date of the proposed NTR. These values have not changed since the final NTR was published in December of 1992. The rule's Administrative Record Matrix in the administrative record of today's rule contains the specific RfDs, q1*s, and BCFs used in calculating these criteria.

Proposed Changes to the Human Health Criteria Methodology: EPA recently proposed revisions to the 1980 ambient water quality criteria derivation guidelines (the Human Health Guidelines). See *Draft Water Quality Criteria Methodology: Human Health*, 63 FR 43756, August 14, 1998; see also *Draft Water Quality Criteria Methodology: Human Health*, U.S. EPA Office of Water, EPA 822–Z–98–001. The EPA revisions consist of five documents: *Draft Water Quality Criteria Methodology: Human Health*, EPA 822–Z–98–001; *Ambient Water Quality Criteria Derivation Methodology Human Health, Technical Support Document, Final Draft*, EPA–822–B–98–005; and three Ambient Water Quality Criteria for the Protection of Human Health, Drafts—one each for Acrylonitrile, 1,3-Dichloropropene (1,3-DCP), and Hexachlorobutadiene (HCBD), respectively, EPA–822–R–98–006, –005, and –004. All five documents are contained in the administrative record for today's rule.

The proposed methodology revisions reflect significant scientific advances that have occurred during the past nineteen years in such key areas as cancer and noncancer risk assessments, exposure assessments and bioaccumulation. For specific details on

these proposed changes and others, please refer to the Federal Register notice or the EPA document.

It should be noted that some of the proposed changes may result in significant numeric changes in the ambient water quality criteria. However, EPA will continue to rely on existing criteria as the basis for regulatory and non-regulatory decisions, until EPA revises and reissues a 304(a) criteria guidance using the revised final human health criteria methodology. The existing criteria are still viewed as scientifically acceptable by EPA. The intention of the proposed methodology revisions is to present the latest scientific advancements in the areas of risk and exposure assessment in order to incrementally improve the already sound toxicological and exposure bases for these criteria. As EPA's current human health criteria are the product of many years worth of development and peer review, it is reasonable to assume that revisiting all existing criteria, and incorporating peer review into such review, could require comparable amounts of time and resources. Given these circumstances, EPA proposed a process for revisiting these criteria as part of the overall revisions to the methodology for deriving human health criteria. This process is discussed in the Implementation Section of the Notice of *Draft Revisions to the Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health* (see 63 FR 43771–43776, August 14, 1998).

The State of California in its Ocean Plan, adopted in 1990 and approved by EPA in 1991, established numeric water quality criteria using an average fish and shellfish consumption rate of 23 grams per day. This value is based on an earlier California Department of Health Services estimate. The State is currently in the process of readopting its water quality control plans for inland surface waters, enclosed bays, and estuaries. The State intends to consider information on fish and shellfish consumption rates evaluated and summarized in a report prepared by the State's Pesticide and Environmental Toxicology Section of the Office of Environmental Health Hazard Assessment of the California Environmental Protection Agency. The report, entitled, *Chemicals in Fish Report No. 1: Consumption of Fish and Shellfish in California and the United States,* was published in final draft form in July of 1997, and released to the public on September 16, 1997. The report is currently undergoing final evaluation, and is expected to published in final form in the near future. This final draft report is contained in the administrative record for today's rule. Although EPA has not used this fish consumption value here because this information has not yet been finalized, the State may use any appropriate higher state-specific fish and shellfish consumption rates in its readoption of criteria in its statewide plans.

a. 2,3,7,8-TCDD (Dioxin) Criteria

In today's action, EPA is promulgating human health water quality criteria for 2,3,7,8-tetrachlorodibenzo-p-dioxin ("dioxin") at the same levels as promulgated in the NTR, as amended. These criteria are derived from EPA's 1984 CWA section 304(a) criteria guidance document for dioxin.

For National Pollutant Discharge Elimination System (NPDES) purposes, EPA supports the regulation of other dioxin and dioxin-like compounds through the use of toxicity equivalencies or TEQs in NPDES permits (see discussion below). For California waters, if the discharge of dioxin or dioxin-like compounds has reasonable potential to cause or contribute to a violation of a narrative criterion, numeric water quality-based effluent limits for dioxin or dioxin-like compounds should be included in NPDES permits and should be expressed using a TEQ scheme.

EPA has been evaluating the health threat posed by dioxin nearly continuously for over two decades. Following issuance of the 1984 criteria guidance document, evaluating the health effects of dioxin and recommending human health criteria for dioxin, EPA prepared draft reassessments reviewing new scientific information relating to dioxin in 1985 and 1988. EPA's Science Advisory Board (SAB), reviewing the 1988 draft reassessment, concluded that while the risk assessment approach used in 1984 criteria guidance document had inadequacies, a better alternative was unavailable (see SAB's *Dioxin Panel Review of Documents from the Office or Research and Development relating to the Risk and Exposure Assessment of 2,3,7,8-TCDD* (EPA–SAB–EC–90–003, November 28, 1989) included in the administrative record for today's rule). Between 1988 and 1990, EPA issued numerous reports and guidances relating to the control of dioxin discharges from pulp and paper mills. See e.g., EPA Memorandum, "Strategy for the Regulation of Discharges of PHDDs & PHDFs from Pulp and Paper Mills to the Waters of the United States," from Assistant Administrator for Water to Regional Water Management Division Directors and NPDES State Directors, dated May 21, 1990 (AR NL–16); EPA Memorandum, "State Policies, Water Quality Standards, and Permit Limitations Related to 2,3,7,8-TCDD in Surface Water," from the Assistant Administrator for Water to Regional Water Management Division Directors, dated January 5, 1990 (AR VA–66). These documents are available in the administrative record for today's rule.

In 1991, EPA's Administrator announced another scientific reassessment of the risks of exposure to dioxin (see Memorandum from Administrator William K. Reilly to Erich W. Bretthauer, Assistant Administrator for Research and Development and E. Donald Elliott, General Counsel, entitled *Dioxin: Follow-Up to Briefing on Scientific Developments,* April 8, 1991, included in the administrative record for today's rule). At that time, the Administrator made clear that while the reassessment was underway, EPA would continue to regulate dioxin in accordance with existing Agency policy. Thereafter, the Agency proceeded to regulate dioxin in a number of environmental programs, including standards under the Safe Drinking Water Act and the CWA.

The Administrator's promulgation of the dioxin human health criteria in the 1992 NTR affirmed the Agency's decision that the ongoing reassessment should not defer or delay regulating this potent contaminant, and further, that the risk assessment in the 1984 criteria guidance document for dioxin continued to be scientifically defensible. Until the reassessment process was completed, the Agency could not "say with any certainty what the degree or directions of any changes in the risk estimates might be" (57 FR 60863–64).

The basis for the dioxin criteria as well as the decision to include the dioxin criteria in the 1992 NTR pending the results of the reassessment were challenged. See *American Forest and Paper Ass'n, Inc. et al.* v. *U.S. EPA* (Consolidated Case No. 93–0694 (RMU) D.D.C.). By order dated September 4, 1996, the Court upheld EPA's decision. EPA's brief and the Court's decision are included in the administrative record for today's rule.

EPA has undertaken significant effort toward completion of the dioxin reassessment. On September 13, 1994, EPA released for public review and comment a draft reassessment of toxicity and exposure to dioxin. See *Health Assessment Document for 2,3,7,8-Tetrachlorobenzo-p-Dioxin (TCDD) and Related Compounds,* U.S. EPA, 1994. EPA is currently addressing comments made by the public and the SAB and anticipates that the final

revised reassessment will go to the SAB in the near future. With today's rule, the Agency reaffirms that, notwithstanding the on-going risk reassessment, EPA intends to continue to regulate dioxin to avoid further harm to public health, and the basis for the dioxin criteria, both in terms of the cancer potency and the exposure estimates, remains scientifically defensible. The fact that EPA is reassessing the risk of dioxin, virtually a continuous process to evaluate new scientific information, does not mean that the current risk assessment is "wrong". It continues to be EPA's position that until the risk assessment for dioxin is revised, EPA supports and will continue to use the existing risk assessment for the regulation of dioxin in the environment. Accordingly, EPA today promulgates dioxin criteria based on the 1984 criteria guidance document for dioxin and promulgated in the NTR in 1992.

Toxicity Equivalency: The State of California, in its 1991 water quality control plans, adopted human health criteria for dioxin and dioxin-like compounds based on the concept of toxicity equivalency (TEQ) using toxicity equivalency factors (TEFs). EPA Region 9 reviewed and approved the State's use of the TEQ concept and TEFs in setting the State's human health water quality criteria for dioxin and dioxin-like compounds.

In 1987, EPA formally embraced the TEQ concept as an interim procedure to estimate the risks associated with exposures to 210 chlorinated dibenzo-p-dioxin and chlorinated dibenzofuran (CDD/CDF) congeners, including 2,3,7,8-TCDD. This procedure uses a set of derived TEFs to convert the concentration of any CDD/CDF congener into an equivalent concentration of 2,3,7,8-TCDD. In 1989, EPA updated its TEFs based on an examination of relevant scientific evidence and a recognition of the value of international consistency. This updated information can be found in EPA's 1989 *Update to the Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-dioxins and -dibenzofurans (CDDs and CDFs)* (EPA/625/3–89/016, March 1989). EPA had been active in an international effort aimed at adopting a common set of TEFs (International TEFs/89 or I–TEFs/89), to facilitate information exchange on environmental contamination of CDD/CDF. This document reflects EPA's support of an internationally consistent set of TEFs, the I–TEFs/89. EPA uses I–TEFs/89 in many of its regulatory programs.

In 1994, the World Health Organization (WHO) revised the TEF scheme for dioxins and furans to include toxicity from dioxin-like compounds (Ahlborg et al., 1994). However, no changes were made to the TEFs for dioxins and furans. In 1998, the WHO re-evaluated and revised the previously established TEFs for dioxins (Ds), furans (Fs) and dioxin-like compounds (Vanden Bers, 1998). The nomenclature for this TEF scheme is TEQDFP–WHO98, where TEQ represents the 2,3,7,8-TCDD Toxic Equivalence of the mixture, and the subscript DFP indicates that dioxins (Ds) furans (Fs) and dioxin-like compounds (P) are included in the TEF scheme. The subscript 98 following WHO displays the year changes were made to the TEF scheme.

EPA intends to use the 1998 WHO TEF scheme in the near future. At this point however, EPA will support the use of either the 1989 interim procedures or the 1998 WHO TEF scheme but encourages the use of the 1998 WHO TEF scheme in State programs. EPA expects California to use a TEF scheme in implementing the 2,3,7,8-TCDD water quality criteria contained in today's rule. The TEQ and TEF approach provide a methodology for setting NPDES water quality-based permit limits that are protective of human health for dioxin and dioxin-like compounds.

Several commenters requested EPA to promulgate criteria for other forms of dioxin, in addition to 2,3,7,8-TCDD. EPA's draft reassessment for dioxin examines toxicity based on the TEQ concept and I–TEFs/89. When EPA completes the dioxin reassessment, the Agency intends to adopt revised 304(a) water quality criteria guidance based on the reassessment for dioxin. If necessary, EPA will then act to amend the NTR and CTR to reflect the revised 304(a) water quality criteria guidance.

b. Arsenic Criteria

EPA is not promulgating human health criteria for arsenic in today's rule. EPA recognizes that it promulgated human health water quality criteria for arsenic for a number of States in 1992, in the NTR, based on EPA's 1980 section 304(a) criteria guidance for arsenic established, in part, from IRIS values current at that time. However, a number of issues and uncertainties existed at the time of the CTR proposal concerning the health effects of arsenic. These issues and uncertainties were summarized in "Issues Related to Health Risk of Arsenic" which is contained in the administrative record for today's rule. During the period of this rulemaking action, EPA commissioned a study of arsenic health effects by the National Research Council (NRC) arm of the National Academy of Sciences. EPA received the NRC report in March of 1999. EPA scientists reviewed the report, which recommended that EPA lower the Safe Drinking Water Act arsenic maximum contaminant level (MCL) as soon as possible (The arsenic MCL is currently 50 µg/l.) The bladder cancer analysis in the NRC report will provide part of the basis for the risk assessment of a proposed revised arsenic MCL in the near future. After promulgating a revised MCL for drinking water, the Agency plans to revise the CWA 304(a) human health criteria for arsenic in order to harmonize the two standards. Today's rule defers promulgating arsenic criteria based on the Agency's previous risk assessment of skin cancer. In the meantime, permitting authorities in California should rely on existing narrative water quality criteria to establish effluent limitations as necessary for arsenic. California has previously expressed its science and policy position by establishing a criterion level of 5 µg/l for arsenic. Permitting authorities may, among other considerations, consider that value when evaluating and interpreting narrative water quality criteria.

c. Mercury Criteria

The human health criteria promulgated here use the latest RfD in EPA's Integrated Risk Information System (IRIS) and the weighted average practical bioconcentration factor (PBCF) from the 1980 section 304(a) criteria guidance document for mercury. EPA considered the approach used in the Great Lakes Water Quality Guidance ("Guidance") incorporating Bioaccumulation Factors (BAFs), but rejected this approach for reasons outlined below. The equation used here to derive an ambient water quality criterion for mercury from exposure to organisms and water is:

$$HHC = \frac{RfD \times BW}{WC + (FC \times PBCF)}$$

Where:
RfD = Reference Dose
BW = Body Weight
WC = Water Consumption
FC = Total Fish and Shellfish Consumption per Day
PBCF = Practical Bioconcentration Factor (weighted average)

For mercury, the most current RfD from IRIS is 1×10^{-4} mg/kg/day. The RfD used a benchmark dose as an estimate of a No Observed Adverse Effect Level (NOAEL). The benchmark dose was calculated by applying a Weibel model

for extra risk to all neurological effects observed in 81 Iraqi children exposed in utero as reported in Marsh, et. al. (1987). Maternal hair mercury was the measure of exposure. Extra risk refers to an adjustment for background incidence of a given health effect. Specifically, the extra risk is the added incidence of observing an effect above the background rate relative to the proportion of the population of interest that is not expected to exhibit such as effect. The resulting estimate was the lower 95% statistical bound on the 10% extra risk; this was 11 ppm mercury in maternal hair. This dose in hair was converted to an equivalent ingested amount by applying a model based on data from human studies; the resulting benchmark dose was 1×10^{-3} mg/kg body weight /day. The RfD was calculated by dividing the benchmark dose by a composite uncertainty factor of 10. The uncertainty factor was used to account for variability in the human population, in particular the wide variation in biological half-life of methylmercury and the variation that is observed in the ration of hair mercury to mercury in the blood. In addition the uncertainty factor accounts for lack of a two-generation reproductive study and the lack of data on long term effects of childhood mercury exposures. The RfD thus calculated is 1×10^{-4} mg/kg body weight/day or 0.1 µg/kg/day. The body weight used in the equation for the mercury criteria, as discussed in the Human Health Guidelines, is a mean adult human body weight of 70 kg. The drinking water consumption rate, as discussed in the Human Health Guidelines, is 2.0 liters per day.

The bioconcentration factor or BCF is defined as the ratio of chemical concentration in the organism to that in surrounding water. Bioconcentration occurs through uptake and retention of a substance from water only, through gill membranes or other external body surfaces. In the context of setting exposure criteria it is generally understood that the terms "BCF" and "steady-state BCF" are synonymous. A steady-state condition occurs when the organism is exposed for a sufficient length of time that the ratio does not change substantially.

The BCFs that were used herein are the "Practical Bioconcentration Factors (PBCFs)" that were derived in 1980: 5500 for fresh water, 3765 for estuarine coastal waters, and 9000 for open oceans. See pages C–100–1 of Ambient Water Quality Criteria for Mercury (EPA 440/5–80–058) for a complete discussion on the PBCF. Because of the way they were derived, these PBCFs take into account uptake from food as well as uptake from water. A weighted average PBCF was calculated to take into account the average consumption from the three waters using the following equation:

$$\text{Weighted Average Practical BCF} = \frac{\sum(\text{FC} \times \text{PBCF})}{\sum(\text{FC})} = \frac{(0.00172)(5500) + (0.00478)(3765) + (0.0122)(9000)}{0.00172 + 0.00478 + 0.0122} = \frac{137.3}{0.0187} = 7342.6$$

Given the large value for the weighted average PBCF, the contribution of drinking water to total daily intake is negligible so that assumptions concerning the chemical form of mercury in drinking water become less important. The human health mercury criteria promulgated for this rule are based on the latest RfD as listed in IRIS and a weighted PBCF from the 1980 § 304(a) criteria guidance document for mercury.

On March 23, 1995 (60 FR 15366), EPA promulgated the Great Lakes Water Quality Guidance ("Guidance"). The Guidance incorporated bioaccumulation factors (BAFs) in the derivation of criteria to protect human health because it is believed that BAFs are a better predictor than BCFs of the concentration of a chemical within fish tissue since BAFs include consideration of the uptake of contaminants from all routes of exposure. A bioaccumulation factor is defined as the ratio (in L/kg) of a substance's concentration in tissue to the concentration in the ambient water, in situations where both the organism and its food are exposed and the ratio does not change substantially over time. The final Great Lakes Guidance establishes a hierarchy of four methods for deriving BAFs for non-polar organic chemicals: (1) Field-measured BAFs; (2) predicted BAFs derived using a field-measured biota-sediment accumulation factor; (3) predicted BAFs derived by multiplying a laboratory-measured BCF by a food chain multiplier; and (4) predicted BAFs derived by multiplying a BCF calculated from the log Kow by a food-chain multiplier. The final Great Lakes Guidance developed BAFs for trophic levels three and four fish of the Great Lakes Basin. Respectively, the BAFs for mercury for trophic level 3 and 4 fish were: 27,900 and 140,000.

The BAF promulgated in the GLI was developed specifically for the Great Lakes System. It is uncertain whether the BAFs of 27,900 and 140,000 are appropriate for use in California at this time; therefore, today's final rule does not use the GLI BAF in establishing human health criteria for mercury in California. The magnitude of the BAF for mercury in a given system depends on how much of the total mercury is present in the methylated form. Methylation rates vary widely from one water body to another for reasons that are not fully understood. Lacking the data, it is difficult to determine if the BAF used in the GLI represents the true potential for mercury to bioaccumulate in California surface waters. The true, average BAF for California could be higher or lower. For more information see EPA's Response to Comments document in the administrative record for this rule (specifically comments CTR–002–007(b) and CTR–016–007).

EPA is developing a national BAF for mercury as part of revisions to its 304(a) criteria for human health; however, the BAF methodology that will be used is currently under evaluation as part of EPA's revisions to its National Human Health Methodology (see section F.3 above). EPA applied a similar methodology in its Mercury Study Report to Congress (MSRC) to derive a BAF for methylmercury. The MSRC is available through NTIS (EPA–452/R–97–003). Although a BAF was derived in the MSRC, EPA does not intend to use this BAF for National application. EPA is engaged in a separate effort to incorporate additional mercury bioaccumulation data that was not considered in the MSRC, and to assess uncertainties with using a National BAF approach for mercury. Once the proposed revised human health methodology, including the BAF component, is finalized, EPA will revise its 304(a) criteria for mercury to reflect changes in the underlying methodology, recommendations contained in the MSRC, and recommendations in a National Academy of Science report on human health assessment of methylmercury. When EPA changes its 304(a) criteria recommendation for mercury, States and Tribes will be expected to review their water quality standards for mercury and make any revisions necessary to ensure their standards are scientifically defensible.

New information may become available regarding the bioaccumulation

of mercury in certain water bodies in California. EPA supports the use of this information to develop site-specific criteria for mercury. Further, if a California water body is impaired due to mercury fish tissue or sediment contamination, loadings of mercury could contribute to or exacerbate the impairment. Therefore, one option regulatory authorities should consider is to include water quality-based effluent limits (WQBELs) in permits based on mass for discharges to the impaired water body. Such WQBELs must be derived from and comply with applicable State water quality standards (including both numeric and narrative criteria) and assure that the discharge does not cause or contribute to a violation of water quality standards.

d. Polychlorinated Biphenyls (PCBs) Criteria

The NTR, as amended, calculated human health criteria for PCBs using a cancer potency factor of 7.7 per mg/kg-day from the Agency's IRIS. This cancer potency factor was derived from the Norback and Weltman (1985) study which looked at rats that were fed Aroclor 1260. The study used the linearized multistage model with a default cross-species scaling factor (body weight ratio to the ⅔ power). Although it is known that PCB mixtures vary greatly as to their potency in producing biological effects, for purposes of its carcinogenicity assessment, EPA considered Aroclor 1260 to be representative of all PCB mixtures. The Agency did not pool data from all available congener studies or generate a geometric mean from these studies, since the Norback and Weltman study was judged by EPA as acceptable, and not of marginal quality, in design or conduct as compared with other studies. Thereafter, the Institute for Evaluating Health Risks (IEHR, 1991) reviewed the pathological slides from the Norback and Weltman study, and concluded that some of the malignant liver tumors should have been interpreted as nonmalignant lesions, and that the cancer potency factor should be 5.1 per mg/kg-day as compared with EPA's 7.7 per mg/kg-day.

The Agency's peer-reviewed reassessment of the cancer potency of PCBs published in a final report, *PCBs: Cancer Dose-Response Assessment and Applications to Environmental Mixtures* (EPA/600/P–96/001F), adopts a different approach that distinguishes among PCB mixtures by using information on environmental processes. (The report is included in the administrative record of today's rule.) The report considers all cancer studies (which used commercial mixtures only) to develop a range of cancer potency factors, then uses information on environmental processes to provide guidance on choosing an appropriate potency factor for representative classes of environmental mixtures and different pathways. The reassessment provides that, depending on the specific application, either central estimates or upper bounds can be appropriate. Central estimates describe a typical individual's risk, while upper bounds provide assurance (*i.e.*, 95% confidence) that this risk is not likely to be underestimated if the underlying model is correct. Central estimates are used for comparing or ranking environmental hazards, while upper bounds provide information about the precision of the comparison or ranking. In the reassessment, the use of the upper bound values were found to increase cancer potency estimates by two or three-fold over those using central tendency. Upper bounds are useful for estimating risks or setting exposure-related standards to protect public health, and are used by EPA in quantitative cancer risk assessment. Thus, the cancer potency of PCB mixtures is determined using a tiered approach based on environmental exposure routes with upper-bound potency factors (using a body weight ratio to the ¾ power) ranging from 0.07 (lowest risk and persistence) to 2 (high risk and persistence) per mg/kg-day for average lifetime exposures to PCBs. It is noteworthy that bioaccumulated PCBs appear to be more toxic than commercial PCBs and appear to be more persistent in the body. For exposure through the food chain, risks can be higher than other exposures.

EPA issued the final reassessment report on September 27, 1996, and updated IRIS to include the reassessment on October 1, 1996. EPA updated the human health criteria for PCBs in the National Toxics Rule on September 27, 1999. For today's rule, EPA derived the human health criteria for PCBs using a cancer potency factor of 2 per mg/kg-day, an upper bound potency factor reflecting high risk and persistence. This decision is based on recent multimedia studies indicating that the major pathway of exposure to persistent toxic substances such as PCBs is via dietary exposure (*i.e.*, contaminated fish and shellfish consumption).

Following is the calculation of the human health criterion (HHC) for organism and water consumption:

$$HHC = \frac{RF \times BW \times (1{,}000\ \mu g/mg)}{q1^* \times [WC + (FC \times BCF)]}$$

Where:

RF = Risk Factor = 1×10^{-6}
BW = Body Weight = 70 kg
q1* = Cancer slope factor = 2 per mg/kg-day
WC = Water Consumption = 2 l/day
FC = Fish and Shellfish Consumption = 0.0065 kg/day
BCF = Bioconcentration Factor = 31,200
the HHC (µg/l) = 0.00017 µg/l (rounded to two significant digits).

Following is the calculation of the human health criterion for organism only consumption:

$$HHC = \frac{RF \times BW \times (1{,}000\ \mu g/mg)}{q1^* \times FC \times BCF}$$

Where:

RF = Risk Factor = 1×10^{-6}
BW = Body Weight = 70 kg
q1* = Cancer slope factor = 2 per mg/kg-day
FC = Total Fish and Shellfish Consumption per Day = 0.0065 kg/day
BCF = Bioconcentration Factor = 31,200
the HHC (µg/l) = 0.00017 µg/l (rounded to two significant digits).

The criteria are both equal to 0.00017 µg/l and apply to total PCBs. *See PCBs: Cancer Dose Response Assessment and Application to Environmental Mixtures* (EPA/600/9–96–001F). For a discussion of the body weight, water consumption, and fish and shellfish consumption factors, see the Human Health Guidelines. For a discussion of the BCF, see the 304(a) criteria guidance document for PCBs (included in the administrative record for today's rule).

e. Excluded Section 304(a) Human Health Criteria

As is the case in the NTR, as amended, today's rule does not promulgate criteria for certain priority pollutants for which CWA section 304(a) criteria guidance exists because those criteria were not based on toxicity to humans or aquatic organisms. The basis for those particular criteria is organoleptic effects (*e.g.*, taste and odor) which would make water and edible aquatic life unpalatable but not toxic. Because the basis for this rule is to protect the public health and aquatic life from toxicity consistent with the language and intent in CWA section 303(c)(2)(B), EPA is promulgating criteria only for those priority toxic pollutants whose criteria recommendations are based on toxicity. The CWA section 304(a) human health criteria based on organoleptic effects for zinc and 3-methyl-4-chlorophenol are excluded for this reason. See the 1992 NTR discussion at 57 FR 60864.

f. Cancer Risk Level

EPA's CWA section 304(a) criteria guidance documents for priority toxic pollutants that are based on carcinogenicity present concentrations for upper bound risk levels of 1 excess cancer case per 100,000 people (10^{-5}), per 1,000,000 people (10^{-6}), and per 10,000,000 people (10^{-7}). However, the criteria documents do not recommend a particular risk level as EPA policy.

As part of the proposed rule, EPA requested and received comment on the adoption of a 10^{-5} risk level for carcinogenic pollutants. The effect of a 10^{-5} risk level would have been to increase (*i.e.*, make less stringent) carcinogenic pollutant criteria values (noted in the matrix by footnote c) that are not already promulgated in the NTR, by one order of magnitude. For example, the organism-only criterion for gamma BHC (pollutant number 105 in the matrix) is 0.013 µg/l; the criterion based on a 10^{-5} risk level would have been 0.13 µg/l. EPA received several comments that indicated a preference for a higher (10^{-4} and 10^{-5}) risk level for effluent dependent waters or other types of special circumstances.

In today's rule, EPA is promulgating criteria that protect the general population at an incremental cancer risk level of one in a million (10^{-6}) for all priority toxic pollutants regulated as carcinogens, consistent with the criteria promulgated in the NTR for the State of California. Standards adopted by the State contained in the Enclosed Bays and Estuaries Plan (EBEP), and the Inland Surface Waters Plan (ISWP), partially approved by EPA on November 6, 1991, and the Ocean Plan approved by EPA on June 28, 1990, contained a risk level of 10^{-6} for most carcinogens. The State has historically protected at a 10^{-6} risk level for carcinogenic pollutants.

EPA, in its recent human health methodology revisions, proposed acceptable lifetime cancer risk for the general population in the range of 10^{-5} to 10^{-6}. EPA also proposed that States and Tribes ensure the most highly exposed populations do not exceed a 10^{-4} risk level. However, EPA's draft methodology revisions also stated that it will derive 304(a) criteria at a 10^{-6} risk level, which the Agency believes reflects the appropriate risk for the general population and which applies a risk management policy which ensures protection for all exposed population groups. (Draft Water Quality Criteria Methodology: Human Health, EPA 822–Z–98–001, August 1998, Appendix II, page 72).

Subpopulations within a State may exist, such as recreational and subsistence anglers, who as a result of greater exposure to a contaminant are at greater risk than the standard 70 kilogram person eating 6.5 grams per day of fish and shellfish and drinking 2.0 liters per day of drinking water with pollutant levels meeting the water quality criteria. EPA acknowledges that at any given risk level for the general population, those segments of the population that are more highly exposed face a higher relative risk. For example, if fish are contaminated at a level permitted by criteria derived on the basis of a risk level of 10^{-6}, individuals consuming up to 10 times the assumed fish consumption rate would still be protected at a 10^{-5} risk level. Similarly, individuals consuming 100 times the general population rate would be protected at a 10^{-4} risk level. EPA, therefore, believes that derivation of criteria at the 10^{-6} risk level is a reasonable risk management decision protective of designated uses under the CWA. While outside the scope of this rule, EPA notes that States and Tribes, however, have the discretion to adopt water quality criteria that result in a higher risk level (*e.g.*, 10^{-5}). EPA expects to approve such criteria if the State or Tribe has identified the most highly exposed subpopulation within the State or Tribe, demonstrates the chosen risk level is adequately protective of the most highly exposed subpopulation, and has completed all necessary public participation.

This demonstration has not happened in California. Further, the information that is available on highly exposed subpopulations in California supports the need to protect the general population at the 10^{-6} level. California has cited the Santa Monica Bay Seafood Consumption Study as providing the best available data set for estimating consumption of sport fish and shellfish in California for both marine or freshwater sources (Chemicals in Fish Report No. 1: Consumption of Fish and Shellfish in California and the United States, Final Draft Report, July 1997). Consumption rates of sport fish and shellfish of 21g/day, 50 g/day, 107 g/day, and 161 g/day for the median, mean, 90th, and 95th percentile rates, respectively, were determined from this study. Additional consumption of commercial species in the range of approximately 8 to 42 g/day would further increase these values. Clearly the consumption rates for the most highly exposed subpopulation within the State exceeds 10 times the 6.5 g/day rates used in the CTR. Therefore, use of a risk level of 10^{-5} for the general population would not be sufficient to protect the most highly exposed population in California at a 10^{-4} risk level. On the other hand, even the most highly exposed subpopulations cited in the California study do not have consumption rates approaching 100 times the 6.5 g/day rates used in the CTR. The use of the 10^{-6} risk level to protect average level consumers does not subject these subpopulations to risk levels as high as 10^{-4}.

EPA believes its decision to establish a 10^{-6} risk level for the CTR is also consistent with EPA's policy in the NTR to select the risk level that reflect the policies or preferences of CWA programs in the affected States. California adopted standards for priority toxic pollutants for its ocean waters in 1990 using a 10^{-6} risk level to protect human health (California Ocean Plan, 1990). In April 1991, and again in November 1992, California adopted standards for its inland surface waters and enclosed bays and estuaries in its Inland Surface Waters Plan (ISWP) and its Enclosed Bays and Estuaries Plan (EBEP) using a 10^{-6} risk level. To be consistent with the State's water quality standards, EPA used a 10^{-6} risk level for California in the NTR at 57 FR 60867. The State has continued using a 10^{-6} risk level to protect human health for its standards that were not withdrawn with the ISWP and EBEP. The most recent expression of risk level preference is contained in the Draft Functional Equivalent Document, Amendment of the Water Quality Control Plan for Ocean Waters of California, October 1998, where the State recommended maintaining a consistent risk level of 10^{-6} for the human health standards that it was proposing to revise.

EPA received several comments requesting a 10^{-5} risk level based on the risk level chosen for the Great Lakes Water Quality Guidance (the Guidance). There are several differences between the guidelines for the derivation of human health criteria contained in the Guidance and the California Toxics Rule (CTR) that make a 10^{-5} risk factor appropriate for the Guidance, but not for the CTR. These differences result in criteria developed using the 10^{-5} risk factor in the Guidance being at least as stringent as criteria derived under the CTR using a 10^{-6} risk factor. The relevant aspects of the Guidance include:

- Use of fish consumption rates that are considerably higher than fish consumption rates for the CTR.
- Use of bioaccumulation factors rather than bioconcentration factors in

estimating exposure, considerably increasing the dose of carcinogens to sensitive subgroups.

- Consideration of additivity of effects of mixtures for both carcinogenic and noncarcinogenic pollutants.

This combination of factors increase the calculated carcinogenic risk substantially under the Guidance (the combination would generally be more than one order of magnitude), making a lower overall risk factor acceptable. The Guidance risk factor provides, in fact, criteria with at least the same level of protection against carcinogens as criteria derived with a higher risk factor using the CTR. A lower risk factor for the CTR would not be appropriate absent concomitant changes in the derivation procedures that provide equivalent risk protection.

G. Description of Final Rule

1. Scope

Paragraph (a) in 40 CFR 131.38, entitled "Scope," states that this rule is a promulgation of criteria for priority toxic pollutants in the State of California for inland surface waters, enclosed bays, and estuaries. Paragraph (a) in 40 CFR 131.38 also states that this rule contains an authorizing compliance schedule provision.

2. EPA Criteria for Priority Toxic Pollutants

EPA's criteria for California are presented in tabular form at 40 CFR 131.38. For ease of presentation, the table that appears combines water quality criteria promulgated in the NTR, as amended, that are outside the scope of this rulemaking, with the criteria that are within the scope of today's rule. This is intended to help readers determine applicable water quality criteria for the State of California. The table contains footnotes for clarification.

Paragraph (b) in 40 CFR 131.38 presents a matrix of the applicable EPA aquatic life and/or human health criteria for priority toxic pollutants in California. Section 303(c)(2)(B) of the CWA addresses only pollutants listed as "toxic" pursuant to section 307(a) of the CWA for which EPA has developed section 304(a) criteria guidance. As discussed earlier in this preamble, the section 307(a) list of toxics contains 65 compounds and families of compounds, which potentially include thousands of specific compounds. Of these, the Agency identified a list of 126 "priority toxic pollutants" to implement the CWA (see 40 CFR 131.36(b)). Reference in this rule to priority toxic pollutants, toxic pollutants, or toxics refers to the 126 priority toxic pollutants.

EPA has not developed both aquatic life and human health CWA section 304(a) criterion guidance for all of the priority toxic pollutants. The matrix in 40 CFR 131.38(b) contains human health criteria in Column D for 92 priority toxic pollutants which are divided into Column 1: criteria for water consumption (i.e., 2.0 liters per day) and aquatic organism consumption (i.e., 6.5 grams per day of aquatic organisms); and Column 2: criteria for aquatic organism consumption only. The term aquatic organism includes fish and shellfish such as shrimp, clams, oysters and mussels. One reason the total number of priority toxic pollutants with criteria today differs from the total number of priority toxic pollutants contained in earlier published CWA section 304(a) criteria guidance is because EPA has developed and is promulgating chromium criteria for two valence states with respect to aquatic life criteria. Thus, although chromium is a single priority toxic pollutant, there are two criteria for chromium for aquatic life protection. See pollutant 5 in today's rule at 40 CFR 131.38(b). Another reason is that EPA is promulgating human health criteria for nine priority pollutants for which health-based national criteria have been calculated based on information obtained from EPA's IRIS database (EPA provided notice of these nine criteria in the NTR for inclusion in future State triennial reviews. See 57 FR 60848, 60890).

The matrix contains aquatic life criteria for 23 priority pollutants. These are divided into freshwater criteria (Column B) and saltwater criteria (Column C). These columns are further divided into acute and chronic criteria. The aquatic life criteria are considered by EPA to be protective when applied under the conditions described in the section 304(a) criteria documents and in the TSD. For example, water body uses should be protected if the criteria are not exceeded, on average, once every three year period. It should be noted that the criteria maximum concentrations (the acute criteria) are short-term concentrations and that the criteria continuous concentrations (the chronic criteria) are four-day averages. It should also be noted that for certain metals, the actual criteria are equations which are included as footnotes to the matrix. The toxicity of these metals is water hardness dependent and may be adjusted. The values shown in the table are illustrative only, based on a hardness expressed as calcium carbonate of 100 mg/l. Finally, the criterion for pentachlorophenol is pH dependent. The equation is the actual criterion and is included as a footnote. The value shown in the matrix is for a pH of 7.8. Several of the freshwater aquatic life criteria are incorporated into the matrix in the format used in the 1980 criteria methodology which uses a final acute value instead of a continuous maximum concentration. This distinction is noted in footnote g of the table.

The final rule at 40 CFR 131.38(c) establishes the applicability of the criteria to the State of California. 40 CFR 131.38(d) is described later in Section F, of this preamble. EPA has included in this rule provisions necessary to implement numeric criteria in a way that maintains the level of protection intended. These provisions are included in 40 CFR 131.38(c) of today's rule. For example, in order to do steady state waste load allocation analyses, most States have low flow values for streams and rivers which establish flow rates for various purposes. These low flow values become design flows for sizing treatment plants and developing water quality-based effluent limits and/or TMDLs. Historically, these design flows were selected for the purposes of waste load allocation analyses which focused on instream dissolved oxygen concentrations and protection of aquatic life. With the publication of the 1985 TSD, EPA introduced hydrologically and biologically based analyses for the protection of aquatic life and human health. (These concepts have been expanded subsequently in EPA's *Technical Guidance Manual for Performing Wasteload Allocations, Book 6, Design Conditions,* U.S. EPA, 1986. These analyses are included in Appendix D of the revised TSD. The discussion here is greatly simplified and is provided to support EPA's decision to promulgate design flows for instream flows and thereby maintain the adequacy of the criteria for priority toxic pollutants.) EPA recommended either of two methods for calculating acceptable low flows, the traditional hydrologic method developed by the U.S. Geological Survey or a biological based method developed by EPA. Other methods for evaluating the instream flow record may be available; use of these methods may result in TMDLs and/or water quality-based effluent limitations which adequately protect human health and/or aquatic life. The results of either of these two methods, or an equally protective alternative method, may be used.

The State of California may adopt specific design flows for streams and rivers to protect designated uses against the effects of toxics. EPA believes it is

important to specify design flows in today's rule so that, in the absence of state design flows, the criteria promulgated today would be implemented appropriately. The TSD also recommends the use of three dynamic models to perform wasteload allocations. Dynamic wasteload models do not generally use specific steady state design flows but accomplish the same effect by factoring in the probability of occurrence of stream flows based on the historical flow record.

The low flows specified in the rule explicitly contain duration and frequency of occurrence which represent certain probabilities of occurrence. Likewise, the criteria for priority toxic pollutants are defined with duration and frequency components. Dynamic modeling techniques explicitly predict the effects of variability in receiving water, effluent flow, and pollution variation. Dynamic modeling techniques, as described in the TSD, allow for calculating wasteload allocations that meet the criteria for priority toxic pollutants without using a single, worst-case concentration based on a critical condition. Either dynamic modeling or steady state modeling can be used to implement the criteria promulgated today. For simplicity, only steady state conditions are discussed here. Clearly, if the criteria were implemented using design flows that are too high, the resulting toxic controls would not be adequate, because the resulting ambient concentrations would exceed EPA's criteria.

In the case of aquatic life, assuming exceedences occur more frequently than once in three years on the average, exceedences would result in diminished vitality of stream ecosystems characterized by the loss of desired species. Numeric water quality criteria should apply at all flows that are equal to or greater than flows specified below. The low flow values are:

Type of criteria	Design flow
Acute Aquatic Life (CMC).	1 Q 10 or 1 B 3
Chronic Aquatic Life (CCC).	7 Q 10 or 4 B 3
Human Health	harmonic mean flow

Where:

1 Q 10 is the lowest one day flow with an average recurrence frequency of once in 10 years determined hydrologically;

1 B 3 is biologically based and indicates an allowable exceedence of once every 3 years. It is determined by EPA's computerized method (DFLOW model);

7 Q 10 is the lowest average 7 consecutive day low flow with an average recurrence frequency of once in 10 years determined hydrologically;

4 B 3 is biologically based and indicates an allowable exceedences for 4 consecutive days once every 3 years. It is determined by EPA's computerized method (DFLOW model);

EPA is requiring that the harmonic mean flow be applied with human health criteria. The harmonic mean is a standard calculated statistical value. EPA's model for human health effects assumes that such effects occur because of a long-term exposure to low concentration of a toxic pollutant, for example, two liters of water per day for seventy years. To estimate the concentrations of the toxic pollutant in those two liters per day by withdrawal from streams with a high daily variation in flow, EPA believes the harmonic mean flow is the correct statistic to use in computing such design flows rather than other averaging techniques. (For a description of harmonic means see "Design Stream Flows Based on Harmonic Means," Lewis A. Rossman, Jr. of Hydraulics Engineering, Vol. 116, No. 7, July, 1990.)

All waters (including lakes, estuaries, and marine waters), whether or not suitable for such hydrologic calculations, are subject to the criteria promulgated today. Such criteria will need to be attained at the end of the discharge pipe, unless the State authorizes a mixing zone. Where the State plans to authorize a mixing zone, the criteria would apply at the locations allowed by the mixing zone. For example, the chronic criteria (CCC) would apply at the defined boundary of the chronic mixing zone. Discussion of and guidance on these factors are included in the revised TSD in Chapter 4.

EPA is aware that the criteria promulgated today for some of the priority toxic pollutants are at concentrations less than EPA's current analytical detection limits. Analytical detection limits have never been an acceptable basis for setting water quality criteria since they are not related to actual environmental impacts. The environmental impact of a pollutant is based on a scientific determination, not a measuring technique which is subject to change. Setting the criteria at levels that reflect adequate protection tends to be a forcing mechanism to improve analytical detection methods. See 1985 Guidelines, page 21. As the methods improve, limits based on the actual criteria necessary to protect aquatic life and human health become measurable. The Agency does not believe it is appropriate to promulgate criteria that are not sufficiently protective. EPA discusses this issue further in its Response to Comment Document for today's final rule.

EPA does believe, however, that the use of analytical detection limits are appropriate for assessing *compliance* with National Pollutant Discharge Elimination System (NPDES) permit limits. This view of the role of detection limits was first articulated in guidance for translating dioxin criteria into NPDES permit limits. See "Strategy for the Regulation of Discharges of PHDDs and PHDFs from Pulp and Paper Mills to Waters of the U.S." Memorandum from the Assistant Administrator for Water to the Regional Water Management Division Directors, May 21, 1990. This guidance presented a model for addressing toxic pollutants which have criteria less than current detection limits. EPA, in more recent guidance, recommends the use of the "minimum level" or ML for reporting sample results to assess compliance with WQBELs (TSD page 111). The ML, also called the "quantification level," is the level at which the entire analytical system gives recognizable mass spectra and acceptable calibration points, i.e., the point at which the method can reliably quantify the amount of pollutant in the sample. States can use their own procedures to average and otherwise account for monitoring data, *e.g.*, quantifying results below the ML. These results can then be used to assess compliance with WQBELs. (See 40 CFR part 132, Appendix F, Procedure 8.B.) This approach is applicable to priority toxic pollutants with criteria less than current detection limits. EPA's guidance explains that standard analytical methods may be used for purposes of assessing compliance with permit limits, but not for purposes of establishing water quality criteria or permit limits. Under the CWA, analytical methods are appropriately used in connection with NPDES permit limit compliance assessments. Because of the function of water quality criteria, EPA has not considered the sensitivity of analytical methods in deriving the criteria promulgated today.

EPA has promulgated 40 CFR 131.38(c)(3) to determine when freshwater or saltwater aquatic life criteria apply. This provision incorporates a time parameter to better define the critical condition. The structure of the paragraph is to establish

applicable rules and to allow for site-specific exceptions where the rules are not consistent with actual field conditions. Because a distinct separation generally does not exist between freshwater and saltwater aquatic communities, EPA is establishing the following: (1) The freshwater criteria apply at salinities of 1 part per thousand and below at locations where this occurs 95% or more of the time; (2) saltwater criteria apply at salinities of 10 parts per thousand and above at locations where this occurs 95% more of the time; and (3) at salinities between 1 and 10 parts per thousand the more stringent of the two apply unless EPA approves the application of the freshwater or saltwater criteria based on an appropriate biological assessment. The percentiles included here were selected to minimize the chance of overlap, that is, one site meeting both criteria. Determination of these percentiles can be done by any reasonable means such as interpolation between points with measured data or by the application of calibrated and verified mathematical models (or hydraulic models). It is not EPA's intent to require actual data collection at particular locations.

In the brackish water transition zones of estuaries with varying salinities, there generally will be a mix of freshwater and saltwater species. Generally, therefore, it is reasonable for the more stringent of the freshwater or saltwater criteria to apply. In evaluating appropriate data supporting the alternative set of criteria, EPA will focus on the species composition as its preferred method. This assignment of criteria for fresh, brackish and salt waters was developed in consultation with EPA's research laboratories at Duluth, Minnesota and Narragansett, Rhode Island. The Agency believes such an approach is consistent with field experience.

Paragraph (d) in 40 CFR 131.38 lists the designated water and use classifications for which the criteria apply. The criteria are applied to the beneficial use designations adopted by the State of California; EPA has not promulgated any new use classifications in this rule.

Exceedences Frequency: In a water quality criterion for aquatic life, EPA recommends an allowable frequency for excursions of the criteria. See 1985 Guidelines, pages 11–13. This allowable frequency provides an appropriate period of time during which the aquatic community can recover from the effect of an excursion and then function normally for a period of time before the next excursion. An excursion is defined as an occurrence of when the average concentration over the duration of the averaging period is above the CCC or the CMC. As ecological communities are naturally subjected to a series of stresses, the allowable frequency of pollutant stress may be set at a value that does not significantly increase the frequency or severity of all stresses combined. See also TSD, Appendix D. In addition, providing an allowable frequency for exceeding the criterion recognizes that it is not generally possible to assure that criteria are never exceeded. (TSD, page 36.)

Based on the available data, today's rule requires that the acute criterion for a pollutant be exceeded no more than once in three years on the average. EPA is also requiring that the chronic criterion for a pollutant be exceeded no more than once in three years on the average. EPA acknowledges that States may develop allowable frequencies that differ from these allowable frequencies, so long as they are scientifically supportable, but believes that these allowable frequencies are protective of the designated uses where EPA is promulgating criteria.

The use of aquatic life criteria for developing water quality-based effluent limits in permits requires the permitting official to use an appropriate wasteload allocation model. (TSD, Appendix D–6.) As discussed above, there are generally two methods for determining design flows, the hydrologically-based method and the biologically-based method.

The biologically-based method directly uses the averaging periods and frequencies specified in the aquatic life criteria for determining design flows. (TSD, Appendix. D–8.) Because the biologically-based method calculates the design flow directly from the duration and allowable frequency, it most accurately provides the allowed number of excursions. The hydrologically based method applies the CMC at a design flow equal to or equivalent to the 1Q10 design flow (i.e., the lowest one-day flow with an average recurrence frequency of once in ten years), and applies the CCC at the 7Q10 design flow (i.e., the lowest average seven consecutive day flow with a recurrence frequency of once in ten years).

EPA established a three year allowable frequency in the NTR. In settlement of the litigation on the NTR, EPA stated that it was in the midst of conducting, sponsoring, or planning research aimed at addressing scientific issues related to the basis for and application of water quality criteria and mentioned the issue of allowable frequency. See Partial Settlement Agreement in *American Forest and Paper Ass'n, Inc. et al.* v. *U.S. EPA* (Consolidated Case No. 93–0694 (RMU) D.D.C. To that end, EPA is reevaluating issues raised about allowable frequency as part of its work in revising the 1985 Guidelines.

EPA recognizes that additional data concerning (a) the probable frequency of lethal events for an assemblage of taxa covering a range of sensitivities to pollutants, (b) the probable frequency of sublethal effects for such taxa, (c) the differing effects of lethal and sublethal events in reducing populations of such taxa, and (d) the time needed to replace organisms lost as a result of toxicity, may lead to further refinement of the allowable frequency value. EPA has not yet completed this work. Until this work is complete, EPA believes that where EPA promulgates criteria, the three year allowable frequency represents a value in the reasonable range for this parameter.

3. Implementation

Once the applicable designated uses and water quality criteria for a water body are determined, under the National Pollutant Discharge Elimination System (NPDES) program discharges to the water body must be characterized and the permitting authority must determine the need for permit limits. If a discharge causes, has the reasonable potential to cause, or contributes to an excursion of a numeric or narrative water quality criteria, the permitting authority must develop permit limits as necessary to meet water quality standards. These permit limits are water quality-based effluent limitations or WQBELs. The terms "cause," "reasonable potential to cause," and "contribute to" are the terms in the NPDES regulations for conditions under which water quality-based permit limits are required. See 40 CFR 122.44(d)(1).

Since the publication of the proposed CTR, the State of California adopted procedures which detail how water quality criteria will be implemented through NPDES permits, waste discharge requirements, and other regulatory approaches. These procedures entitled, *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* were adopted on March 2, 2000. Once these procedures are submitted for review under CWA section 303(c), EPA will review them as they relate to water quality standards, and approve or disapprove them.

Several commenters understood the language in the preamble to the proposed rule regarding implementation

to mean that site-specific criteria, variances, and other actions would be prohibited or severely limited by the CTR. Site-specific criteria, variances and other actions modifying criteria are neither prohibited nor limited by the CTR. The State, if it so chooses, still can make these changes to its water quality standards, subject to EPA approval. However, with this Federal rule in effect, the State cannot implement any modifications that are less stringent than the CTR without an amendment to the CTR to reflect these modifications. EPA will make every effort to expeditiously accommodate Federal rulemaking of appropriate modifications to California's water quality standards. In the preamble to the proposed CTR, and here today, EPA is emphasizing that these efforts to amend the CTR on a case-by-case basis will generally increase the time before a modification can be implemented.

4. Wet Weather Flows

EPA has for a longtime maintained that CWA section 301(b)(1)(C) applies to NPDES permits for discharges from municipal separate storm sewer systems. Recently, the U.S. Court of Appeals for the Ninth Circuit upheld NPDES permits issued by EPA for five Arizona municipal separate storm sewer systems and addressed this issue specifically. *Defenders of Wildlife, et al.* v. *Browner,* No. 98–71080 (9th Cir., October 1999). The Court held that the CWA does not require "strict compliance" with State water quality standards for municipal storm sewer permits under section 301(b)(1)(C), but that at the same time, the CWA does give EPA discretion to incorporate appropriate water quality-based effluent limitations under another provision, CWA section 402(p)(3)(B)(iii).

The Court based its decision on the structure of section 402(p)(3), which contains distinct language for discharges of industrial storm water and municipal storm water. In section 402(p)(3)(A), Congress requires that "dischargers associated with industrial activity shall meet all applicable provisions of [section 402] and section [301]." 33 U.S.C. section 1342(p)(3)(A). The Court noted, therefore, that by incorporation, industrial storm water discharges need to achieve "any more stringent limitation, including those necessary to meet water quality standards * * *" The Court explained that industrial storm water discharges "must comply strictly with State water quality standards" but that Congress chose not to include a similar provision for municipal storm sewer discharges, including instead a requirement for controls to reduce pollutants to the maximum extent practicable or MEP standard in section 402(p)(3)(B). Reading the two related sections together, the Court concluded that section 402(p)(3)(B)(iii) does not require "strict compliance" by municipal storm sewer discharges according to section 301(b)(1)(C). At the same time, however, the Court found that the language in CWA section 402(p)(3)(B)(iii) which states that permits for discharges from municipal storm sewers shall require "such other provisions as the Administrator of the state determines appropriate for the control of such pollutants" provides EPA with discretion to incorporate provisions lending to ultimate compliance with water quality standards.

EPA believes that compliance with water quality standards through the use of Best Management Practices (BMPs) is appropriate. EPA articulated its position on the use of BMPs in storm water permits in the policy memorandum entitled, "Interim Permitting Approach for Water Quality-Based Effluent Limitations In Storm Water Permits" which was signed by the Assistant Administrator for Water, Robert Perciasepe on August 1, 1996 (61 FR 43761, August 9, 1996). A copy of this memorandum is contained in the administrative record for today's rule. The policy affirms the use of BMPs as a means to attain water quality standards in municipal storm water permits, and embraces BMPs as an interim permitting approach.

The interim permitting approach uses BMPs in first-round storm water permits, and expanded or better-tailored BMPs in subsequent permits, where necessary, to provide for the attainment of water quality standards. In cases where adequate information exists to develop more specific conditions or limitations to meet water quality standards, these conditions or limitations are to be incorporated into storm water permits, as necessary and appropriate.

This interim permitting approach, however, only applies to EPA. EPA encourages the State to adopt a similar policy for municipal storm water permits. This interim permitting approach provides time, where necessary, to more fully assess the range of issues and possible options for the control of storm water discharges for the protection of water quality. More information on this issue is included in the response to comment document in response to specific storm water issues raised by commenters.

5. Schedules of Compliance

A compliance schedule refers to an enforceable sequence of interim requirements in a permit leading to ultimate compliance with water quality-based effluent limitations or WQBELs in accordance with the CWA. The authorizing compliance schedule provision authorizes, but does not require, the permit issuing authority in the State of California to include such compliance schedules in permits under appropriate circumstances. The State of California is authorized to administer the National Pollutant Discharge Elimination System (NPDES) program and may exercise its discretion when deciding if a compliance schedule is justified because of the technical or financial (or other) infeasibility of immediate compliance. An authorizing compliance schedule provision is included in today's rule because of the potential for existing dischargers to have new or more stringent effluent limitations for which immediate compliance would not be possible or practicable.

New and Existing Dischargers: The provision allows compliance schedules only for an "existing discharger" which is defined as any discharger which is not a "new California discharger." A "new California discharger" includes "any building, structure, facility, or installation from which there is, or may be, a 'discharge of pollutants', the construction of which commences after the effective date of this regulation." These definitions are modeled after the existing 40 CFR 122.2 definitions for parallel terms, but with a cut-off date modified to reflect this rule. Only "new California dischargers" are required to comply immediately upon commencement of discharge with effluent limitations derived from the criteria in this rule. For "existing dischargers" whose permits are reissued or modified to contain new or more stringent limitations based upon certain water quality requirements, the permit could allow up to five years, or up to the length of a permit, to comply with such limitations. The provision applies to new or more stringent effluent limitations based on the criteria in this EPA rule.

EPA has included "increasing dischargers" within the category of "existing dischargers" since "increasing dischargers" are existing facilities with a change—an increase—in their discharge. Such facilities may include those with seasonal variations. "Increasing dischargers" will already have treatment systems in place for their current discharge, thus, they have less

opportunity than a new discharger does to design and build a new treatment system which will meet new water quality-based requirements for their changed discharge. Allowing existing facilities with an increasing discharge a compliance schedule will avoid placing the discharger at a competitive disadvantage vis-a-vis other existing dischargers who are eligible for compliance schedules.

Today's rule does not prohibit the use of a short-term "shake down period" for new California dischargers as is provided for new sources or new dischargers in 40 CFR 122.29(d)(4). These regulations require that the owner or operator of (1) a new source; (2) a new discharger (as defined in 40 CFR 122.2) which commenced discharge after August 13, 1979; or (3) a recommencing discharger shall install and implement all pollution control equipment to meet the conditions of the permit before discharging. The facility must also meet all permit conditions in the shortest feasible time (not to exceed 90 days). This shake-down period is not a compliance schedule. This approach may be used to address violations which may occur during a new facility's start-up, especially where permit limits are water quality-based and biological treatment is involved.

The burden of proof to show the necessity of a compliance schedule is on the discharger, and the discharger must request approval from the permit issuing authority for a schedule of compliance. The discharger should submit a description of the minimum required actions or evaluations that must be undertaken in order to comply with the new or more restrictive discharge limits. Dates of completion for the required actions or evaluations should be included, and the proposed schedule should reflect the shortest practicable time to complete all minimum required actions.

Duration of Compliance Schedules: Today's rule provides that compliance schedules may provide for up to five years to meet new or more stringent effluent limitations in those limited circumstances where the permittee can demonstrate to the permit authority that an extended schedule is warranted. EPA's regulations at 122.47 require compliance with standards as soon as possible. This means that permit authorities should not allow compliance schedules where the permittee fails to demonstrate their necessity. This provision should not be considered a default compliance schedule duration for existing facilities.

In instances where dischargers wish to conduct toxicological studies, analyze results, and adopt and implement new or revised water quality-based effluent limitations, EPA believes that five years is sufficient time within which to complete this process. See the preamble to the proposed rule.

Under this rule, where a schedule of compliance exceeds one year, interim requirements are to be specified and interim progress reports are to be submitted at least annually to the permit issuing authority, in at least one-year time intervals.

The rule allows all compliance schedules to extend up to a maximum duration of five years, which is the maximum term of any NPDES permit. See 40 CFR 122.46. The discharger's opportunity to obtain a compliance schedule occurs when the existing permit for that discharge is issued, reissued or modified to contain more stringent limits based on the water quality criteria in today's rule. Such compliance schedules, however, cannot be extended to any indefinite point of time in the future because the compliance schedule provision in this rule will sunset on May 18, 2005. The sunset applies to the authorizing provision in today's rule (40 CFR 131.38(e)), not to individual schedules of compliance included in specific NPDES permits. Delays in reissuing expired permits (including those which continue in effect under applicable NPDES regulations) cannot indefinitely extend the period of time during which a compliance schedule is in effect. This would occur where the permit authority includes the single maximum five-year compliance schedule in a permit that is reissued just before the compliance schedule provision sunsets (having been previously issued without WQBELS using the rule's criteria on the eve of the effective date of this rule). Instead, the effect of the sunset provision is to limit the longest time period for compliance to ten years after the effective date of this rule.

EPA recognizes that where a permit is modified during the permit term, and the permittee needs the full five years to comply, the five-year schedule may extend beyond the term of the modified permit. In such cases, the rule allows for the modified permit to contain a compliance schedule with an interim limit by the end of the permit term. When the permit is reissued, the permit authority may extend the compliance schedule in the next permit, provided that, taking into account the amount of time allowed under the previous permit, the entire compliance schedule contained in the permit shall not exceed five years. Final permit limits and compliance dates will be included in the record for the permit. Final compliance dates must occur within five years from the date of permit issuance, reissuance, or modification, unless additional or less time is provided for by law.

EPA would prefer that the State adopt an authorizing compliance schedule provision but recognizes that the State may not be able to complete this action for some time after promulgation of the CTR. Thus, EPA has chosen to promulgate the rule with a sunset provision which states that the authorizing compliance schedule provision will cease or sunset on May 18, 2005. However, if the State Board adopts, and EPA approves, a statewide authorizing compliance schedule provision significantly prior to May 18, 2005, EPA will act to stay the authorizing compliance schedule provision in today's rule. Additionally, if a Regional Board adopts, and the State Board adopts and EPA approves, a Regional Board authorizing compliance schedule provision, EPA will act to stay today's provision for the appropriate or corresponding geographic region in California. At that time, the State Board's or Regional Board's authorizing compliance schedule provision will govern the ability of the State regulatory entity to allow a discharger to include a compliance schedule in a discharger's NPDES permit.

Antibacksliding: EPA wishes to address the potential concern over antibacksliding where revised permit limits based on new information are the result of the completion of additional studies. The Agency's interpretation of the CWA is that the antibacksliding requirements of section 402(o) of the CWA do not apply to revisions to effluent limitations made before the scheduled date of compliance for those limitations.

State Compliance Schedule Provisions: EPA supports the State in adopting a statewide provision independent of or as part of the effort to readopt statewide water quality control plans, or in adopting individual basin-wide compliance schedule provisions through its nine Regional Water Quality Control Boards (RWQCBs). The State and RWQCBs have broad discretion to adopt a provision, including discretion on reasonable lengths of time for final compliance with WQBELs. EPA recognizes that practical time frames within which to set interim goals may be necessary to achieve meaningful, long-term improvements in water quality in California.

At this time, two RWQCBs have adopted an authorizing compliance schedule provision as an amendment to

their respective Basin Plans during the Boards' last triennial review process. The Basin Plans have been adopted by the State and have come to EPA for approval. Thus, the Basin Plans' provisions are effective for the respective Basins. If and when EPA approves of either Regional Basin Plan, EPA will expeditiously act to amend the CTR, staying its compliance schedule provision, for the appropriate geographic region.

6. Changes From Proposed Rule

A few changes were made in the final rule from the proposal both as a result of the Agency's consideration of issues raised in public comments and Endangered Species Act consultation with the U.S. Fish and Wildlife Service (FWS) and U.S. National Marine Fisheries Service (NMFS). The important changes include: reserving the mercury aquatic life criteria; reserving the selenium freshwater acute aquatic life criterion; reserving the chloroform human health criteria; and adding a sunset provision to the authorizing compliance schedule provision. EPA also clarified that the CTR will not replace priority toxic pollutant criteria which were adopted by the San Francisco Regional Water Quality Control Board in its 1986 Basin Plan, adopted by the State Board, and approved by EPA; specifying the harmonic mean for human health criteria for non-carcinogens and adding a provision which explicitly allows the State to adopt and implement an alternative averaging period, frequency, and design flow for a criterion after opportunity for public comment.

The first two changes, the reservation of mercury criteria and selenium criterion, are discussed in more detail below in Section L., The Endangered Species Act (ESA). The selenium criterion is also discussed in more detail above in Section E., Derivation of Criteria, in subsection 2.b., Freshwater Acute Selenium Criterion. EPA has also decided to reserve a decision on numeric criteria for chloroform and therefore not promulgate chloroform criteria in the final rule. As part of a large-scale regulation promulgated in December 1998 under the Safe Drinking Water Act, EPA published a health-based goal for chloroform (the maximum contaminant level goal or MCLG) of zero, see 63 FR 69390, Dec. 16, 1998. EPA provided new data and analyses concerning chloroform for public review and comment, including a different, mode of action approach for estimating the cancer risk, 63 FR 15674, March 31, 1998, but did not reach a conclusion on how to use that new information in establishing the final MCLG, pending further review by the Science Advisory Board. EPA has now concluded that any further actions on water quality criteria should take into account the new data and analysis as reviewed by the SAB. This decision is consistent with a recent federal court decision vacating the MCLG for chloroform (*Chlorine Chemistry Council v. EPA*, No. 98–1627 (DC Cir., Mar. 31,2000)). EPA intends to reassess the human health 304(a) criteria recommendation for chloroform. For these reasons, EPA has decided to reserve a decision on numeric criteria for chloroform in the CTR and not promulgate water quality criteria as proposed. Permitting authorities in California should continue to rely on existing narrative criteria to establish effluent limitations as necessary for chloroform.

The sunset provision for the authorizing compliance schedule provision has been added to ease the transition from a Federal provision to the State's provision that was adopted in March 2000 as part of its' new statewide implementation plan. The sunset provision is discussed in more detail in Section G.5 of today's preamble. The CTR matrix at 40 CFR 131.38(b)(1) makes it explicit that the rule does not supplant priority toxic pollutant criteria which were adopted by the San Francisco Regional Water Quality Control Board in its 1986 Basin Plan, adopted by the State Board, and approved by EPA. This change is discussed more fully in Section D.4. of today's preamble. EPA modified the design flow for implementing human health criteria for non-carcinogens from a 30Q5 to a harmonic mean. Human health criteria for non-carcinogens are based on an RfD, which is an acceptable daily exposure over a lifetime. EPA matched the criteria for protection over a human lifetime with the longest stream flow averaging period, i.e., the harmonic mean. Lastly, the CTR now contains language which is intended to make it easier for the State to adopt and implement an alternative averaging period, frequency and related design flow, for situations where the default parameters are inappropriate. This language is found at 40 CFR 131.38(c)(2)(iv).

H. Economic Analysis

This final rule establishes ambient water quality criteria which, by themselves, do not directly impose economic impacts (see section K). These criteria combined with the State-adopted designated uses for inland surface waters, enclosed bays and estuaries, and implementation policies, will establish water quality standards. Until the State implements these water quality standards, there will be no effect of this rule on any entity. The State will implement these criteria by ensuring that NPDES permits result in discharges that will meet these criteria. In so doing, the State will have considerable discretion.

EPA has analyzed the indirect potential costs and benefits of this rule. In order to estimate the indirect costs and benefits of the rule, an appropriate baseline must be established. The baseline is the starting point for measuring incremental costs and benefits of a regulation. The baseline is established by assessing what would occur in the absence of the regulation. At present, State Basin Plans contain a narrative water quality criterion stating that all waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. EPA's regulation at 40 CFR 122.44(d)(1)(vi) requires that where a discharge causes or has the reasonable potential to cause an excursion above a narrative criterion within a State water quality standard, the permitting authority must establish effluent limits but may determine limits using a number of options. These options include establishing "effluent limits on a case-by-case basis, using EPA's water quality criteria published under section 304(a) of the CWA, supplemented where necessary by other relevant information" (40 CFR 122.44(d)(1)(vi)(B)). Thus, to the extent that the State is implementing its narrative criteria by applying the CWA section 304(a) criteria, this rule does not impose any incremental costs because the criteria in this rule are identical to the CWA section 304(a) criteria. Alternatively, to the extent that the State is implementing its narrative criteria on a "case-by-case basis" using "other relevant information" in its permits this rule may impose incremental indirect costs because the criteria in these permits may not be based on CWA 304(a) criteria. Both of these approaches to establishing effluent limits are in full compliance with the CWA.

Because a specific basis for effluent limits in all existing permits in California is not known, it is not possible to determine a precise estimate of the indirect costs of this rule. The incremental costs of the rule may be as low as zero, or as high as $61 million. The high estimate of costs is based on the possibility that most of the effluent limits now in effect are not based on 304(a) criteria. EPA evaluated these

indirect costs using two different approaches. The first approach uses existing discharge data and makes assumptions about future State NPDES permit limits. Actual discharge levels are usually lower than the level set by current NPDES permit limits. This approach, representing the low-end scenario, also assumes that some of the discretionary mechanisms that would enhance flexibility (*e.g.*, site specific criteria, mixing zones) would be granted by the State. The second approach uses a sample of existing permit limits and assumes that dischargers are actually discharging at the levels contained in their permits and makes assumptions about limits statewide that would be required under the rule. This approach, representing the high-end scenario, also assumes that none of the discretionary mechanisms that would enhance flexibility (*e.g.*, site specific criteria, mixing zones) would be granted by the State. These two approaches recognize that the State has significant flexibility and discretion in how it chooses to implement standards within the NPDES permit program, the EA by necessity includes many assumptions about how the State will implement the water quality standards. These assumptions are based on a combination of EPA guidance and current permit conditions for the facilities examined in this analysis. To account for the uncertainty of EPA's implementation assumptions, this analysis estimates a wide range of costs and benefits. By completing the EA, EPA intends to inform the public about how entities might be potentially affected by State implementation of water quality standards in the NPDES permit program. The costs and benefits sections that follow summarize the methodology and results of the analysis.

1. Costs

EPA assessed the potential compliance costs that facilities may incur to meet permit limits based on the criteria in today's rule. The analysis focused on direct compliance costs such as capital costs and operation and maintenance costs (O&M) for end-of-pipe pollution control, indirect source controls, pollution prevention, monitoring, and costs of pursuing alternative methods of compliance.

The population of facilities with NPDES permits that discharge into California's enclosed bays, estuaries and inland surface waters includes 184 major dischargers and 1,057 minor dischargers. Of the 184 major facilities, 128 are publicly owned treatment works (POTWs) and 56 are industrial facilities. Approximately 2,144 indirect dischargers designated as significant industrial users discharge wastewater to those POTWs. In the EA for the proposed CTR, EPA used a three-phased process to select a sample of facilities to represent California dischargers potentially affected by the State's implementation of permit limits based on the criteria contained in this rule.

The first phase consisted of choosing three case study areas for which data was thought to exist. The three case studies with a total of 5 facilities included: the South San Francisco Bay (the San Jose/Santa Clara Water Pollution Control Plant and Sunnyvale Water Pollution Control Plant); the Sacramento River (the Sacramento Regional Wastewater Treatment Plant); and the Santa Ana River (the City of Riverside Water Quality Control Plant and the City of Colton Municipal Wastewater Treatment Facility). The second phase consisted of selecting five additional major industrial dischargers to complement the case-study POTWs.

The third phase involved selecting 10 additional facilities to improve the basis for extrapolating the costs of the selected sample facilities to the entire population of potentially affected dischargers. The additional 10 facilities were selected such that the group examined: (1) Was divided between major POTWs and major industrial discharger categories in proportion to the numbers of facilities in the State; (2) gave greater proportionate representation to major facilities than minor facilities based on a presumption that the majority of compliance costs would be incurred by major facilities; (3) gave a proportionate representation to each of four principal conventional treatment processes typically used by facilities in specified industries in California; and (4) was representative of the proportionate facilities located within the different California Regional Water Quality Control Boards. Within these constraints, facilities were selected at random to complete the sample.

In the EA for today's final rule, EPA primarily used the same sample as the EA for the proposed rule with some modifications. EPA increased the number of minor POTWs and minor industrial facilities in the sample. EPA randomly selected four new minor POTW facilities and five new minor industrial facilities to add to the sample. The number of sample facilities selected in each area under the jurisdiction of a Regional Water Quality Control Board was roughly proportional to the universe of facilities in each area.

For those facilities that were projected to exceed permit limits based on the criteria, EPA estimated the incremental costs of compliance. Using a decision matrix or flow chart, costs were developed for two different scenarios—a "low-end" cost scenario and a "high-end" cost scenario—to account for a range of regulatory flexibility available to the State when implementing permit limits based on the water quality criteria. The assumptions for baseline loadings also vary over the two scenarios. The low-end scenario generally assumed that facilities were discharging at the maximum effluent concentrations taken from actual monitoring data, while the high-end scenario generally assumed that facilities were discharging at their current effluent limits. The decision matrix specified assumptions used for selection of control options, such as optimization of existing treatment processes and operations, in-plant pollutant minimization and prevention, and end-of-pipe treatment.

The annualized potential costs that direct and indirect dischargers may incur as a result of State implementation of permit limits based on water quality standards using today's criteria are estimated to be between $33.5 million and $61 million. EPA believes that the costs incurred as a result of State implementation of these permit limits will approach the low-end of the cost range. Costs are unlikely to reach the high-end of the range because State authorities are likely to choose implementation options that provide some degree of flexibility or relief to point source dischargers. Furthermore, cost estimates for both scenarios, but especially for the high-end scenario, may be overstated because the analysis tended to use conservative assumptions in calculating these permit limits and in establishing baseline loadings. The baseline loadings for the high-end were based on current effluent limits rather than actual pollutant discharge data. Most facilities discharge pollutants in concentrations well below current effluent limits. In addition, both the high-end and low-end cost estimates in the EA may be slightly overstated since potential costs incurred to reduce chloroform discharges were included in these estimates. EPA made a decision to reserve the chloroform human health criteria after the EA was completed.

Under the low-end cost scenario, major industrial facilities and POTWs would incur about 27 percent of the potential costs, indirect dischargers would incur about 70 percent of the potential costs, while minor dischargers would incur about 3 percent. Of the major direct dischargers, POTWs would incur the largest share of projected costs (87 percent). However, distributed

among 128 major POTWs in the State, the average cost per plant would be $61,000 per year. Chemical and petroleum industries would incur the highest cost of the industrial categories (5.6 percent of the annual costs, with an annual average of $25,200 per plant). About 57 percent of the low-end costs would be associated with pollution prevention activities, while nearly 38 percent would be associated with pursuing alternative methods of compliance under the regulations.

Under the high-end cost scenario, major industrial facilities and POTWs would incur about 94 percent of the potential costs, indirect dischargers would incur about 17 percent of the potential costs, while minor dischargers would incur about 5 percent. Among the major, direct dischargers, two categories would incur the majority of potential costs—major POTWs (82 percent), Chemical/Petroleum Products (9 percent). The average annual per plant cost for different industry categories would ranges from zero to $324,000. The two highest average cost categories would be major POTWs ($324,000 per year) and Chemical/Petroleum Products ($221,264 per year). The shift in proportion of potential costs between direct and indirect dischargers is due to the assumption that more direct dischargers would use end-of-pipe treatment under the high-end scenario. Thus, a smaller proportion of indirect dischargers would be impacted under the high-end scenario, since some municipalities are projected to add end-of-pipe treatment which would reduce the need for controls from indirect discharges. Over 91 percent of the annual costs are for waste minimization and treatment optimization costs. Waste minimization would represent nearly 84% of the total annual costs. Capital and operation and maintenance costs would make up less than 9 percent of annual costs.

Cost-Effectiveness: Cost-effectiveness is estimated in terms of the cost of reducing the loadings of toxic pollutants from point sources. The cost-effectiveness is derived by dividing the projected annual costs of implementing permit limits based on water quality standards using today's criteria by the toxicity-weighted pounds (pound-equivalents) of pollutants removed. Pound-equivalents are calculated by multiplying pounds of each pollutant removed by the toxic weight (based on the toxicity of copper) for that pollutant.

Based on this analysis, State implementation of permit limits based on today's criteria would be responsible for the reduction of about 1.1 million to 2.7 million toxic pound-equivalents per year, or 15 to 50 percent of the toxic-weighted baseline loadings for the high- and low-end scenarios, respectively. The cost-effectiveness of the scenarios would range from $22 (high-end scenario) to $31 (low-end scenario) per pound-equivalent.

2. Benefits

The benefits analysis is intended to provide insight into both the types and potential magnitude of the economic benefits expected as a result of implementation of water quality standards based on today's criteria. To the extent feasible, empirical estimates of the potential magnitude of the benefits were developed and then compared to the estimated costs of implementing water quality standards based on today's criteria.

To perform a benefits analysis, the types or categories of benefits that apply need to be defined. EPA relied on a set of benefits categories that typically apply to changes in the water resource environment. Benefits were categorized as either use benefits or passive (nonuse) benefits depending on whether or not they involve direct use of, or contact with, the resource. The most prominent use benefit categories are those related to recreational fishing, boating, and swimming. Another use benefit category of significance is human health risk reduction. Human health risk reductions can be realized through actions that reduce human exposure to contaminants such as exposure through the consumption of fish containing elevated levels of pollutants. Passive use benefits are those improvements in environmental quality that are valued by individuals apart from any use of the resource in question.

Benefits estimates were derived in this study using an approach in which benefits of discrete large-scale changes in water quality beyond present day conditions were estimated wherever feasible. A share of those benefits was then apportioned to implementation of water quality standards based on today's criteria. The apportionment estimate was based on a three-stage process:

First, EPA assessed current total loadings from all sources that are contributing to the toxics-related water quality problems observed in the State. This defines the overall magnitude of loadings. Second, the share of total loadings that are attributable to sources that would be controlled through implementation of water quality standards based on today's criteria was estimated. Since this analysis was designed to focus only on those controls imposed on point sources, this stage of the process entailed estimating the portion of total loadings originating from point sources. Third, the percentage reduction in loadings expected due to implementation of today's criteria was estimated and then multiplied by the share of point source loadings to calculate the portion of benefits that could be attributed to implementation of water quality standards based on today's criteria.

Total monetized annual benefits were estimated in the range of $6.9 to $74.7 million. By category, annual benefits would be $1.3 to $4.6 million for avoided cancer risk, $2.2 to $15.2 million for recreational angling, and $3.4 to $54.9 million for passive use benefits.

There are numerous categories of potential or likely benefits that have been omitted from the quantified and monetized benefit estimates. In terms of potential magnitudes of benefit, the following are likely to be significant contributors to the underestimation of the monetized values presented above:

- Improvements in water-related (in-stream and near stream) recreation apart from fishing. The omission of potential motorized and nonmotorized boating, swimming, picnicking, and related in-stream and stream-side recreational activities from the benefits estimates could contribute to an appreciable underestimation of total benefits. Such recreational activities have been shown in empirical research to be highly valued, and even modest changes in participation and or user values could lead to sizable benefits statewide. Some of these activities can be closely associated with water quality attributes (notably, swimming). Other recreational activities may be less directly related to the water quality improvements, but might nonetheless increase due to their association with fishing, swimming, or other activities in which the participants might engage.
- Improvements in consumptive and nonconsumptive land-based recreation, such as hunting and wildlife observation. Improvements in aquatic habitats may lead (via food chain and related ecologic benefit mechanisms) to healthier, larger, and more diverse populations of avian and terrestrial species, such as waterfowl, eagles, and otters. Improvements in the populations for these species could manifest as improved hunting and wildlife viewing opportunities, which might in turn increase participation and user day values for such activities. Although the scope of the benefits analysis has not allowed a quantitative assessment of these values at either pre- or post-rule

conditions, it is conceivable that these benefits could be appreciable.

• Improvements in human health resulting from reduction of non-cancer risk. EPA estimated that implementation of water quality standards based on the criteria would result in a reduction of mercury concentrations in fish tissue and, thus, a reduction in the hazard from consumption of mercury contaminated fish. However, EPA was unable to monetize benefits due to reduced non-cancer health effects.

• Human health benefits for saltwater anglers outside of San Francisco Bay were not estimated. The number of saltwater anglers outside of San Francisco Bay is estimated to be 673,000 (based on Huppert, 1989, and U.S. FWS, 1993). The omission of other saltwater anglers may cause human health benefits to be underestimated. In addition, benefit estimates in the EA may be slightly overstated since potential benefits from reductions in chloroform discharges were included in these estimates. EPA made a decision to reserve the chloroform human health criteria after the EA was completed.

EPA received a number of comments which requested the Agency use the cost-benefit analysis in the EA as a factor in setting water quality criteria. EPA does not use the EA as a basis in determining protective water quality criteria. EPA's current regulations at 40 CFR 131.11 state that the criteria must be based on sound scientific rationale and must protect the designated use. From the outset of the water quality standards program, EPA has explained that while economic factors may be considered in designating uses, they may not be used to justify criteria that are not protective of those uses. 44 FR 25223–226, April 30, 1979. See e.g. *Mississippi Commission on Natural Resources* v. *Costle*, 625 F. 2d 1269, 1277 (5th Cir. 1980). EPA reiterated this interpretation of the CWA and its implementing regulations in discussing section 304(a) recommended criteria guidance stating that "they are based solely on data and scientific judgments on the relationship between pollutant concentrations and environmental and human health effects and do not reflect consideration of economic impacts or the technological feasibility of meeting the chemical concentrations in ambient water." 63 FR 36742 and 36762, July 7, 1998.

I. Executive Order 12866, Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), the Agency must determine whether the regulatory action is "significant" and therefore subject to Office of Management and Budget (OMB) review and the requirements of the Executive Order. The Order defines "significant regulatory action" as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another Agency;

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

It has been determined that this rule is not a "significant regulatory action" under the terms of Executive Order 12866 and is therefore not subject to OMB review.

J. Unfunded Mandates Reform Act of 1995

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104–4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures to State, local, and tribal governments, in the aggregate, or to the private sector, of $100 million or more in any one year. Before promulgating any regulation for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows an Agency to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government Agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of the affected small governments to have meaningful and timely input in the development of regulatory proposals with significant Federal intergovernmental mandates, and EPA informing, educating, and advising small governments on compliance with the regulatory requirements.

Today's rule contains no Federal mandates (under the regulatory provisions of Title II of the Unfunded Mandates Reform Act (UMRA)) for State, local, or tribal governments or the private sector. Today's rule imposes no enforceable duty on any State, local or Tribal governments or the private sector; rather, the CTR promulgates ambient water quality criteria which, when combined with State-adopted uses, will create water quality standards for those water bodies with adopted uses. The State will then use these resulting water quality standards in implementing its existing water quality control programs. Thus, today's rule is not subject to the requirements of sections 202 and 205 of the UMRA.

EPA has determined that this rule contains no regulatory requirements that might significantly or uniquely affect small governments. This rule establishes ambient water quality criteria which, by themselves do not directly impact any entity. The State will implement these criteria by ensuring that NPDES permits result in discharges that will meet these criteria. In so doing, the State will have considerable discretion. Until the State implements these water quality standards, there will be no effect of this rule on any entity. Thus, today's rule is not subject to the requirements of section 203 of UMRA.

K. Regulatory Flexibility Act

The Regulatory Flexibility Act generally requires Federal agencies to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the Agency certifies that the rule will not have a significant economic impact of a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions. For purposes of assessing the impacts of today's rule on small entities, small entity is defined as: (1) A small business according to RFA default definitions for small businesses (based on SBA size

standards); (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of today's final rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. This final rule will not impose any requirements on small entities.

Under the CWA water quality standards program, States must adopt water quality standards for their waters that must be submitted to EPA for approval. If the Agency disapproves a State standard and the State does not adopt appropriate revisions to address EPA's disapproval, EPA must promulgate standards consistent with the statutory requirements. EPA has authority to promulgate criteria or standards in any case where the Administrator determines that a revised or new standard is necessary to meet the requirements of the Act. These State standards (or EPA-promulgated standards) are implemented through various water quality control programs including the National Pollutant Discharge Elimination System (NPDES) program that limits discharges to navigable waters except in compliance with an EPA permit or permit issued under an approved State NPDES program. The CWA requires that all NPDES permits must include any limits on discharges that are necessary to meet State water quality standards.

Thus, under the CWA, EPA's promulgation of water quality criteria or standards establishes standards that the State, in turn, implements through the NPDES permit process. The State has considerable discretion in deciding how to meet the water quality standards and in developing discharge limits as needed to meet the standards. In circumstances where there is more than one discharger to a water body that is subject to water quality standards or criteria, a State also has discretion in deciding on the appropriate limits for the different dischargers. While the State's implementation of federally-promulgated water quality criteria or standards may result indirectly in new or revised discharge limits for small entities, the criteria or standards themselves do not apply to any discharger, including small entities.

Today's rule, as explained above, does not itself establish any requirements that are applicable to small entities. As a result of EPA's action here, the State of California will need to ensure that permits it issues include limits as necessary to meet the water quality standards established by the criteria in today's rule. In so doing, the State will have a number of discretionary choices associated with permit writing. While California's implementation of today's rule may ultimately result in some new or revised permit conditions for some dischargers, including small entities, EPA's action today does not impose any of these as yet unknown requirements on small entities.

The RFA requires analysis of the economic impact of a rule only on the small entities subject to the rule's requirements. Courts have consistently held that the RFA imposes no obligation on an Agency to prepare a small entity analysis of the effect of a rule on entities not regulated by the rule. *Motor & Equip. Mrfrs. Ass'n* v. *Nichols*, 142 F.3d 449, 467 & n.18 (D.C. Cir. 1998)(quoting *United States Distribution Companies* v. *FERC*, 88 F.3d 1105, 1170 (D.C. Cir. 1996); see also *American Trucking Association, Inc.* v. *EPA*, 175 F.3d 1027 (D.C. Cir. 1999). This final rule will have a direct effect only on the State of California which is not a small entity under the RFA. Thus, individual dischargers, including small entities, are not directly subject to the requirements of the rule. Moreover, because of California's discretion in implementing these standards, EPA cannot assess the extent to which the promulgation of this rule may subsequently affect any dischargers, including small entities. Consequently, certification under section 605(b) is appropriate. *State of Michigan, et al.* v. *U.S. Environmental Protection Agency*, No. 98–1497 (D.C. Cir. Mar. 3, 2000), slip op. at 41–42.

L. Paperwork Reduction Act

This action requires no new or additional information collection, reporting, or record keeping subject to the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.*

M. Endangered Species Act

Pursuant to section 7(a) of the Endangered Species Act (ESA), EPA has consulted with the U.S. Fish and Wildlife Service and the U.S. National Marine Fisheries Service (collectively, the Services) concerning EPA's rulemaking action for the State of California. EPA initiated informal consultation in early 1994, and completed formal consultation in April 2000. As a result of the consultation, EPA modified some of the provisions in the final rule.

As part of the consultation process, EPA submitted to the Services a Biological Evaluation for their review in October of 1997. This evaluation found that the proposed CTR was not likely to jeopardize the continued existence of any Federally listed species or result in the destruction or adverse modification of designated critical habitat. In April of 1998, the Services sent EPA a draft Biological Opinion which tentatively found that EPA's proposed rule would jeopardize the continued existence of several Federally listed species and result in the destruction or have adverse effect on designated critical habitat. After lengthy discussions with the Services, EPA agreed to several changes in the final rule and the Services in turn issued a final Biological Opinion finding that EPA's action would not likely jeopardize the continued existence of any Federally listed species or result in the destruction or adverse modification of designated critical habitat. EPA's Biological Evaluation and the Services' final Biological Opinion are contained in the administrative record for today's rule.

In order to ensure the continued protection of Federally listed threatened and endangered species and to protect their critical habitat, EPA agreed to reserve the aquatic life criteria for mercury and the acute freshwater aquatic life criterion for selenium. The Services believe that EPA's proposed criteria are not sufficiently protective of Federally listed species and should not be promulgated. EPA agreed that it would reevaluate these criteria in light of the Services concerns before promulgating them for the State of California. Other commitments made by EPA are described in a letter to the Services dated December 16, 1999; this letter is contained in the administrative record for today's rule.

N. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the Agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the Federal Register. A major rule cannot take effect until 60 days after it is published in the Federal Register. This rule is not a major rule as defined

by 5 U.S.C. 804(2). This rule will be effective May 18, 2000.

O. Executive Order 13084, Consultation and Coordination With Indian Tribal Governments

Under Executive Order 13084, EPA may not issue a regulation that is not required by statute, that significantly or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by the tribal governments, or EPA consults with those governments. If EPA complies by consulting, Executive Order 13084 requires EPA to provide to the Office of Management and Budget, in a separately identified section of the preamble to the rule, a description of the extent of EPA's prior consultation with representatives of affected tribal governments, a summary of the nature of their concerns, and a statement supporting the need to issue the regulation. In addition, Executive Order 13084 requires EPA to develop an effective process permitting elected officials and other representatives of Indian tribal governments "to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities."

Today's rule does not significantly or uniquely affect the communities of Indian tribal governments nor does it impose substantial direct compliance cots on them. Today's rule will only address priority toxic pollutant water quality criteria for the State of California and does not apply to waters in Indian country. Accordingly, the requirements of section 3(b) of Executive Order 13084 do not apply to this rule.

P. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 ("NTTAA"), Public Law No. 104–113, section 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

This final rule does not involve technical standards. Therefore, EPA did not consider the use of any voluntary consensus standards.

Q. Executive Order 13132 on Federalism

Executive Order 13132, entitled "Federalism" (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." "Policies that have federalism implications" is defined in the Executive Order to include regulations that have "substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government."

Under section 6 of Executive Order 13132, EPA may not issue a regulation that has federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, or EPA consults with State and local officials early in the process of developing the proposed regulation. EPA also may not issue a regulation that has federalism implications and that preempts State law, unless the Agency consults with State and local officials early in the process of developing the proposed regulation.

This final rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. The rule does not affect the nature of the relationship between EPA and States generally, for the rule only applies to water bodies in California. Further, the rule will not substantially affect the relationship of EPA and the State of California, or the distribution of power or responsibilities between EPA and the State. The rule does not alter the State's authority to issue NPDES permits or the State's considerable discretion in implementing these criteria. The rule simply implements Clean Water Act section 303(c)(2)(B) requiring numeric ambient water quality criteria for which EPA has issued section 304(a) recommended criteria in a manner that is consistent with previous regulatory guidance that the Agency has issued to implement CWA section 303(c)(2)(B). Further, this rule does not preclude the State from adopting water quality standards that meet the requirements of the CWA. Thus, the requirements of section 6 of the Executive Order do not apply to this rule.

Although section 6 of Executive Order 13132 does not apply to this rule, EPA did consult with State and local government representatives in developing this rule. EPA and the State reached an agreement that to best utilize its respective resources, EPA would promulgate water quality criteria and the State would concurrently work on a plan to implement the criteria. Since the proposal of this rule, EPA has kept State officials fully informed of changes to the proposal. EPA has continued to invite comment from the State on these changes. EPA believes that the final CTR incorporates comments from State officials and staff.

R. Executive Order 13045 on Protection of Children From Environmental Health Risks and Safety Risks

Executive Order 13045: "Protection of Children from Environmental Health Risks and Safety Risks" (62 FR 19885, April 23, 1997) applies to any rule that: (1) Is determined to be "economically significant" as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

While this final rule is not subject to the Executive Order because it is not economically significant as defined in Executive Order 12866, we nonetheless have reason to believe that the environmental health or safety risk addressed by this action may have a disproportionate effect on children. As a matter of EPA policy, we therefore have assessed the environmental health or safety effects of ambient water quality criteria on children. The results of this assessment are contained in section F.3., Human Health Criteria.

List of Subjects in 40 CFR Part 131

Environmental protection, Indians—lands, Intergovernmental relations, Reporting and recordkeeping requirements, Water pollution control.

Dated: April 27, 2000.

Carol Browner,

Administrator.

For the reasons set out in the preamble, part 131 of chapter I of title 40 of the Code of Federal Regulations is amended as follows:

PART 131—WATER QUALITY STANDARDS

1. The authority citation for part 131 continues to read as follows:

Authority: 33 U.S.C. 1251 *et seq.*

Subpart D—[Amended]

2. Section 131.38 is added to subpart D to read as follows:

§ 131.38 Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California.

(a) *Scope.* This section promulgates criteria for priority toxic pollutants in the State of California for inland surface waters and enclosed bays and estuaries. This section also contains a compliance schedule provision.

(b)(1) Criteria for Priority Toxic Pollutants in the State of California as described in the following table:

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A		B Freshwater		C Saltwater		D Human Health (10^{-6} risk for carcinogens) For consumption of:	
# Compound	CAS Number	Criterion Maximum Conc. [d] B1	Criterion Continuous Conc. [d] B2	Criterion Maximum Conc. [d] C1	Criterion Continuous Conc. [d] C2	Water & Organisms (µg/L) D1	Organisms Only (µg/L) D2
1. Antimony	7440360					14 a,s	4300 a,t
2. Arsenic [b]	7440382	340 i,m,w	150 i,m,w	69 i,m	36 i,m		
3. Beryllium	7440417					n	n
4. Cadmium [b]	7440439	4.3 e,i,m,w,x	2.2 e,i,m,w	42 i,m	9.3 i,m	n	n
5a. Chromium (III)	16065831	550 e,i,m,o	180 e,i,m,o			n	n
5b. Chromium (VI) [b]	18540299	16 i,m,w	11 i,m,w	1100 i,m	50 i,m	n	n
6. Copper [b]	7440508	13 e,i,m,w,x	9.0 e,i,m,w	4.8 i,m	3.1 i,m	1300	
7. Lead [b]	7439921	65 e,i,m	2.5 e,i,m	210 i,m	8.1 i,m	n	n
8. Mercury [b]	7439976	[Reserved]	[Reserved]	[Reserved]	[Reserved]	0.050 a	0.051 a
9. Nickel [b]	7440020	470 e,i,m,w	52 e,i,m,w	74 i,m	8.2 i,m	610 a	4600 a
10. Selenium [b]	7782492	[Reserved] p	5.0 q	290 i,m	71 i,m	n	n
11. Silver [b]	7440224	3.4 e,i,m		1.9 i,m			
12. Thallium	7440280					1.7 a,s	6.3 a,t
13. Zinc [b]	7440666	120 e,i,m,w,x	120 e,i,m,w	90 i,m	81 i,m		
14. Cyanide [b]	57125	22 o	5.2 o	1 r	1 r	700 a	220,000 a,j
15. Asbestos	1332214					7,000,000 fibers/L k,s	
16. 2,3,7,8-TCDD (Dioxin)	1746016					0.000000013 c	0.000000014 c
17. Acrolein	107028					320 s	780 t
18. Acrylonitrile	107131					0.059 a,c,s	0.66 a,c,t
19. Benzene	71432					1.2 a,c	71 a,c
20. Bromoform	75252					4.3 a,c	360 a,c
21. Carbon Tetrachloride	56235					0.25 a,c,s	4.4 a,c,t
22. Chlorobenzene	108907					680 a,s	21,000 a,j,t
23. Chlorodibromomethane	124481					0.401 a,c	34 a,c
24. Chloroethane	75003						
25. 2-Chloroethylvinyl Ether	110758						

26. Chloroform	67663					[Reserved]	[Reserved]
27. Dichlorobromomethane	75274					0.56 a,c	46 a,c
28. 1,1-Dichloroethane	75343						
29. 1,2-Dichloroethane	107062					0.38 a,c,s	99 a,c,t
30. 1,1-Dichloroethylene	75354					0.057 a,c,s	3.2 a,c,t
31. 1,2-Dichloropropane	78875					0.52 a	39 a
32. 1,3-Dichloropropylene	542756					10 a,s	1,700 a,t
33. Ethylbenzene	100414					3,100 a,s	29,000 a,t
34. Methyl Bromide	74839					48 a	4,000 a
35. Methyl Chloride	74873					n	n
36. Methylene Chloride	75092					4.7 a,c	1,600 a,c
37. 1,1,2,2-Tetrachloroethane	79345					0.17 a,c,s	11 a,c,t
38. Tetrachloroethylene	127184					0.8 c,s	8.85 c,t
39. Toluene	108883					6,800 a	200,000 a
40. 1,2-Trans-Dichloroethylene	156605					700 a	140,000 a
41. 1,1,1-Trichloroethane	71556					n	n
42. 1,1,2-Trichloroethane	79005					0.60 a,c,s	42 a,c,t
43. Trichloroethylene	79016					2.7 c,s	81 c,t
44. Vinyl Chloride	75014					2 c,s	525 c,t
45. 2-Chlorophenol	95578					120 a	400 a
46. 2,4-Dichlorophenol	120832					93 a,s	790 a,t
47. 2,4-Dimethylphenol	105679					540 a	2,300 a
48. 2-Methyl-4,6-Dinitrophenol	534521					13.4 s	765 t
49. 2,4-Dinitrophenol	51285					70 a,s	14,000 a,t
50. 2-Nitrophenol	88755						
51. 4-Nitrophenol	100027						
52. 3-Methyl-4-Chlorophenol	59507						
53. Pentachlorophenol	87865	19 f,w	15 f,w	13	7.9	0.28 a,c	8.2 a,c,j
54. Phenol	108952					21,000 a	4,600,000 a,j,t
55. 2,4,6-Trichlorophenol	88062					2.1 a,c	6.5 a,c
56. Acenaphthene	83329					1,200 a	2,700 a
57. Acenaphthylene	208968						
58. Anthracene	120127					9,600 a	110,000 a

59. Benzidine	92875					0.00012 a,c,s	0.00054 a,c,t
60. Benzo(a)Anthracene	56553					0.0044 a,c	0.049 a,c
61. Benzo(a)Pyrene	50328					0.0044 a,c	0.049 a,c
62. Benzo(b)Fluoranthene	205992					0.0044 a,c	0.049 a,c
63. Benzo(ghi)Perylene	191242						
64. Benzo(k)Fluoranthene	207089					0.0044 a,c	0.049 a,c
65. Bis(2-Chloroethoxy)Methane	111911						
66. Bis(2-Chloroethyl)Ether	111444					0.031 a,c,s	1.4 a,c,t
67. Bis(2-Chloroisopropyl)Ether	39638329					1,400 a	170,000 a,t
68. Bis(2-Ethylhexyl)Phthalate	117817					1.8 a,c,s	5.9 a,c,t
69. 4-Bromophenyl Phenyl Ether	101553						
70. Butylbenzyl Phthalate	85687					3,000 a	5,200 a
71. 2-Chloronaphthalene	91587					1,700 a	4,300 a
72. 4-Chlorophenyl Phenyl Ether	7005723						
73. Chrysene	218019					0.0044 a,c	0.049 a,c
74. Dibenzo(a,h)Anthracene	53703					0.0044 a,c	0.049 a,c
75. 1,2 Dichlorobenzene	95501					2,700 a	17,000 a
76. 1,3 Dichlorobenzene	541731					400	2,600
77. 1,4 Dichlorobenzene	106467					400	2,600
78. 3,3'-Dichlorobenzidine	91941					0.04 a,c,s	0.077 a,c,t
79. Diethyl Phthalate	84662					23,000 a,s	120,000 a,t
80. Dimethyl Phthalate	131113					313,000 s	2,900,000 t
81. Di-n-Butyl Phthalate	84742					2,700 a,s	12,000 a,t
82. 2,4-Dinitrotoluene	121142					0.11 c,s	9.1 c,t
83. 2,6-Dinitrotoluene	606202						
84 Di-n-Octyl Phthalate	117840						
85. 1,2-Diphenylhydrazine	122667					0.040 a,c,s	0.54 a,c,t
86. Fluoranthene	206440					300 a	370 a
87. Fluorene	86737					1,300 a	14,000 a
88. Hexachlorobenzene	118741					0.00075 a,c	0.00077 a,c
89. Hexachlorobutadiene	87683					0.44 a,c,s	50 a,c,t
90. Hexachlorocyclopentadiene	77474					240 a,s	17,000 a,j,t
91. Hexachloroethane	67721					1.9 a,c,s	8.9 a,c,t

92. Indeno(1,2,3-cd) Pyrene	193395					0.0044 a,c	0.049 a,c
93. Isophorone	78591					8.4 c,s	600 c,t
94. Naphthalene	91203						
95. Nitrobenzene	98953					17 a,s	1,900 a,j,t
96. N-Nitrosodimethylamine	62759					0.00069 a,c,s	8.1 a,c,t
97. N-Nitrosodi-n-Propylamine	621647					0.005 a	1.4 a
98. N-Nitrosodiphenylamine	86306					5.0 a,c,s	16 a,c,t
99. Phenanthrene	85018						
100. Pyrene	129000					960 a	11,000 a
101. 1,2,4-Trichlorobenzene	120821						
102. Aldrin	309002	3 g		1.3 g		0.00013 a,c	0.00014 a,c
103. alpha-BHC	319846					0.0039 a,c	0.013 a,c
104. beta-BHC	319857					0.014 a,c	0.046 a,c
105. gamma-BHC	58899	0.95 w		0.16 g		0.019 c	0.063 c
106. delta-BHC	319868						
107. Chlordane	57749	2.4 g	0.0043 g	0.09 g	0.004 g	0.00057 a,c	0.00059 a,c
108. 4,4'-DDT	50293	1.1 g	0.001 g	0.13 g	0.001 g	0.00059 a,c	0.00059 a,c
109. 4,4'-DDE	72559					0.00059 a,c	0.00059 a,c
110. 4,4'-DDD	72548					0.00083 a,c	0.00084 a,c
111. Dieldrin	60571	0.24 w	0.056 w	0.71 g	0.0019 g	0.00014 a,c	0.00014 a,c
112. alpha-Endosulfan	959988	0.22 g	0.056 g	0.034 g	0.0087 g	110 a	240 a
113. beta-Endosulfan	33213659	0.22 g	0.056 g	0.034 g	0.0087 g	110 a	240 a
114. Endosulfan Sulfate	1031078					110 a	240 a
115. Endrin	72208	0.086 w	0.036 w	0.037 g	0.0023 g	0.76 a	0.81 a,j
116. Endrin Aldehyde	7421934					0.76 a	0.81 a,j
117. Heptachlor	76448	0.52 g	0.0038 g	0.053 g	0.0036 g	0.00021 a,c	0.00021 a,c
118. Heptachlor Epoxide	1024573	0.52 g	0.0038 g	0.053 g	0.0036 g	0.00010 a,c	0.00011 a,c
119-125. Polychlorinated biphenyls (PCBs)			0.014 u		0.03 u	0.00017 c,v	0.00017 c,v
126. Toxaphene	8001352	0.73	0.0002	0.21	0.0002	0.00073 a,c	0.00075 a,c
Total Number of Criteria [h]		22	21	22	20	92	90

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Footnotes to Table in Parargraph (b)(1):

a. Criteria revised to reflect the Agency q1* or RfD, as contained in the Integrated Risk Information System (IRIS) as of October 1, 1996. The fish tissue bioconcentration factor (BCF) from the 1980 documents was retained in each case.

b. Criteria apply to California waters except for those waters subject to objectives in Tables III–2A and III–2B of the San Francisco Regional Water Quality Control Board's (SFRWQCB) 1986 Basin Plan, that were adopted by the SFRWQCB and the State Water Resources Control Board, approved by EPA, and which continue to apply.

c. Criteria are based on carcinogenicity of 10 (-6) risk.

d. Criteria Maximum Concentration (CMC) equals the highest concentration of a pollutant to which aquatic life can be exposed for a short period of time without deleterious effects. Criteria Continuous Concentration (CCC) equals the highest concentration of a pollutant to which aquatic life can be exposed for an extended period of time (4 days) without deleterious effects. ug/L equals micrograms per liter.

e. Freshwater aquatic life criteria for metals are expressed as a function of total hardness (mg/L) in the water body. The equations are provided in matrix at paragraph (b)(2) of this section. Values displayed above in the matrix correspond to a total hardness of 100 mg/l.

f. Freshwater aquatic life criteria for pentachlorophenol are expressed as a function of pH, and are calculated as follows: Values displayed above in the matrix correspond to a pH of 7.8. CMC = exp(1.005(pH) − 4.869). CCC = exp(1.005(pH) − 5.134).

g. This criterion is based on 304(a) aquatic life criterion issued in 1980, and was issued in one of the following documents: Aldrin/Dieldrin (EPA 440/5–80–019), Chlordane (EPA 440/5–80–027), DDT (EPA 440/5–80–038), Endosulfan (EPA 440/5–80–046), Endrin (EPA 440/5–80–047), Heptachlor (440/5–80–052), Hexachlorocyclohexane (EPA 440/5–80–054), Silver (EPA 440/5–80–071). The Minimum Data Requirements and derivation procedures were different in the 1980 Guidelines than in the 1985 Guidelines. For example, a "CMC" derived using the 1980 Guidelines was derived to be used as an instantaneous maximum. If assessment is to be done using an averaging period, the values given should be divided by 2 to obtain a value that is more comparable to a CMC derived using the 1985 Guidelines.

h. These totals simply sum the criteria in each column. For aquatic life, there are 23 priority toxic pollutants with some type of freshwater or saltwater, acute or chronic criteria. For human health, there are 92 priority toxic pollutants with either "water + organism" or "organism only" criteria. Note that these totals count chromium as one pollutant even though EPA has developed criteria based on two valence states. In the matrix, EPA has assigned numbers 5a and 5b to the criteria for chromium to reflect the fact that the list of 126 priority pollutants includes only a single listing for chromium.

i. Criteria for these metals are expressed as a function of the water-effect ratio, WER, as defined in paragraph (c) of this section. CMC = column B1 or C1 value x WER; CCC = column B2 or C2 value x WER.

j. No criterion for protection of human health from consumption of aquatic organisms (excluding water) was presented in the 1980 criteria document or in the 1986 Quality Criteria for Water. Nevertheless, sufficient information was presented in the 1980 document to allow a calculation of a criterion, even though the results of such a calculation were not shown in the document.

k. The CWA 304(a) criterion for asbestos is the MCL.

l. [Reserved]

m. These freshwater and saltwater criteria for metals are expressed in terms of the dissolved fraction of the metal in the water column. Criterion values were calculated by using EPA's Clean Water Act 304(a) guidance values (described in the total recoverable fraction) and then applying the conversion factors in § 131.36(b)(1) and (2).

n. EPA is not promulgating human health criteria for these contaminants. However, permit authorities should address these contaminants in NPDES permit actions using the State's existing narrative criteria for toxics.

o. These criteria were promulgated for specific waters in California in the National Toxics Rule ("NTR"), at § 131.36. The specific waters to which the NTR criteria apply include: Waters of the State defined as bays or estuaries and waters of the State defined as inland, i.e., all surface waters of the State not ocean waters. These waters specifically include the San Francisco Bay upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta. This section does not apply instead of the NTR for this criterion.

p. A criterion of 20 ug/l was promulgated for specific waters in California in the NTR and was promulgated in the total recoverable form. The specific waters to which the NTR criterion applies include: Waters of the San Francisco Bay upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta; and waters of Salt Slough, Mud Slough (north) and the San Joaquin River, Sack Dam to the mouth of the Merced River. This section does not apply instead of the NTR for this criterion. The State of California adopted and EPA approved a site specific criterion for the San Joaquin River, mouth of Merced to Vernalis; therefore, this section does not apply to these waters.

q. This criterion is expressed in the total recoverable form. This criterion was promulgated for specific waters in California in the NTR and was promulgated in the total recoverable form. The specific waters to which the NTR criterion applies include: Waters of the San Francisco Bay upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta; and waters of Salt Slough, Mud Slough (north) and the San Joaquin River, Sack Dam to Vernalis. This criterion does not apply instead of the NTR for these waters. This criterion applies to additional waters of the United States in the State of California pursuant to 40 CFR 131.38(c). The State of California adopted and EPA approved a site-specific criterion for the Grassland Water District, San Luis National Wildlife Refuge, and the Los Banos State Wildlife Refuge; therefore, this criterion does not apply to these waters.

r. These criteria were promulgated for specific waters in California in the NTR. The specific waters to which the NTR criteria apply include: Waters of the State defined as bays or estuaries including the San Francisco Bay upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta. This section does not apply instead of the NTR for these criteria.

s. These criteria were promulgated for specific waters in California in the NTR. The specific waters to which the NTR criteria apply include: Waters of the Sacramento-San Joaquin Delta and waters of the State defined as inland (*i.e.*, all surface waters of the State not bays or estuaries or ocean) that include a MUN use designation. This section does not apply instead of the NTR for these criteria.

t. These criteria were promulgated for specific waters in California in the NTR. The specific waters to which the NTR criteria apply include: Waters of the State defined as bays and estuaries including San Francisco Bay upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta; and waters of the State defined as inland (i.e., all surface waters of the State not bays or estuaries or ocean) without a MUN use designation. This section does not apply instead of the NTR for these criteria.

u. PCBs are a class of chemicals which include aroclors 1242, 1254, 1221, 1232, 1248, 1260, and 1016, CAS numbers 53469219, 11097691, 11104282, 11141165, 12672296, 11096825, and 12674112, respectively. The aquatic life criteria apply to the sum of this set of seven aroclors.

v. This criterion applies to total PCBs, e.g., the sum of all congener or isomer or homolog or aroclor analyses.

w. This criterion has been recalculated pursuant to the 1995 Updates: Water Quality Criteria Documents for the Protection of Aquatic Life in Ambient Water, Office of Water, EPA–820–B–96–001, September 1996. See also Great Lakes Water Quality Initiative Criteria Documents for the Protection of Aquatic Life in Ambient Water, Office of Water, EPA–80–B–95–004, March 1995.

x. The State of California has adopted and EPA has approved site specific criteria for the Sacramento River (and tributaries) above Hamilton City; therefore, these criteria do not apply to these waters.

General Notes to Table in Paragraph (b)(1)

1. The table in this paragraph (b)(1) lists all of EPA's priority toxic pollutants whether or not criteria guidance are available. Blank spaces indicate the absence of national section 304(a) criteria guidance. Because of variations in chemical nomenclature systems, this listing of toxic pollutants does not duplicate the listing in Appendix A to 40 CFR Part 423–126 Priority Pollutants. EPA has added the Chemical Abstracts Service (CAS) registry numbers, which provide a unique identification for each chemical.

2. The following chemicals have organoleptic-based criteria recommendations that are not included on this chart: zinc, 3-methyl-4-chlorophenol.

3. Freshwater and saltwater aquatic life criteria apply as specified in paragraph (c)(3) of this section.

(2) Factors for Calculating Metals Criteria. Final CMC and CCC values should be rounded to two significant figures.

(i) $CMC = WER \times (Acute\ Conversion\ Factor) \times (\exp\{m_A[\ln(hardness)]+b_A\})$

(ii) $CCC = WER \times (Acute\ Conversion\ Factor) \times (\exp\{m_C[\ln(hardness)]+b_C\})$

(iii) Table 1 to paragraph (b)(2) of this section:

Metal	m_A	b_A	m_C	b_C
Cadmium	1.128	−3.6867	0.7852	−2.715
Copper	0.9422	−1.700	0.8545	−1.702
Chromium (III)	0.8190	3.688	0.8190	1.561
Lead	1.273	−1.460	1.273	−4.705
Nickel	0.8460	2.255	0.8460	0.0584
Silver	1.72	−6.52		
Zinc	0.8473	0.884	0.8473	0.884

Note to Table 1: The term "exp" represents the base e exponential function.

(iv) Table 2 to paragraph (b)(2) of this section:

Metal	Conversion factor (CF) for freshwater acute criteria	CF for freshwater chronic criteria	CF for saltwater acute criteria	CF [a] for saltwater chronic criteria
Antimony	[d]	[d]	[d]	[d]
Arsenic	1.000	1.000	1.000	1.000
Beryllium	[d]	[d]	[d]	[d]
Cadmium	[b] 0.944	[b] 0.909	0.994	0.994
Chromium (III)	0.316	0.860	[d]	[d]
Chromium (VI)	0.982	0.962	0.993	0.993
Copper	0.960	0.960	0.83	0.83
Lead	[b] 0.791	[b] 0.791	0.951	0.951
Mercury	.....	.....	.....	.....
Nickel	0.998	0.997	0.990	0.990
Selenium	.....	[c]	0.998	0.998
Silver	0.85	[d]	0.85	[d]
Thallium	[d]	[d]	[d]	[d]
Zinc	0.978	0.986	0.946	0.946

Footnotes to Table 2 of Paragraph (b)(2):

[a] Conversion Factors for chronic marine criteria are not currently available. Conversion Factors for acute marine criteria have been used for both acute and chronic marine criteria.

[b] Conversion Factors for these pollutants in freshwater are hardness dependent. CFs are based on a hardness of 100 mg/l as calcium carbonate ($CaCO_3$). Other hardness can be used; CFs should be recalculated using the equations in table 3 to paragraph (b)(2) of this section.

[c] Bioaccumulative compound and inappropriate to adjust to percent dissolved.

[d] EPA has not published an aquatic life criterion value.

Note to Table 2 of Paragraph (b)(2): The term "Conversion Factor" represents the recommended conversion factor for converting a metal criterion expressed as the total recoverable fraction in the water column to a criterion expressed as the dissolved fraction in the water column. See "Office of Water Policy and Technical Guidance on Interpretation and Implementation of Aquatic Life Metals Criteria", October 1, 1993, by Martha G. Prothro, Acting Assistant Administrator for Water available from Water Resource Center, USEPA, Mailcode RC4100, M Street SW, Washington, DC, 20460 and the note to § 131.36(b)(1).

(v) Table 3 to paragraph (b)(2) of this section:

	Acute	Chronic
Cadmium	CF=1.136672—[(ln {hardness}) (0.041838)]	CF = 1.101672—[(ln {hardness})(0.041838)]
Lead	CF=1.46203—[(ln {hardness})(0.145712)]	CF = 1.46203—[(ln {hardness})(0.145712)]

(c) *Applicability.* (1) The criteria in paragraph (b) of this section apply to the State's designated uses cited in paragraph (d) of this section and apply concurrently with any criteria adopted by the State, except when State regulations contain criteria which are more stringent for a particular parameter and use, or except as provided in footnotes p, q, and x to the table in paragraph (b)(1) of this section.

(2) The criteria established in this section are subject to the State's general rules of applicability in the same way and to the same extent as are other Federally-adopted and State-adopted numeric toxics criteria when applied to the same use classifications including mixing zones, and low flow values below which numeric standards can be exceeded in flowing fresh waters.

(i) For all waters with mixing zone regulations or implementation procedures, the criteria apply at the appropriate locations within or at the boundary of the mixing zones; otherwise the criteria apply throughout the water body including at the point of discharge into the water body.

(ii) The State shall not use a low flow value below which numeric standards can be exceeded that is less stringent than the flows in Table 4 to paragraph (c)(2) of this section for streams and rivers.

(iii) Table 4 to paragraph (c)(2) of this section:

Criteria	Design flow
Aquatic Life Acute Criteria (CMC).	1 Q 10 or 1 B 3
Aquatic Life Chronic Criteria (CCC).	7 Q 10 or 4 B 3
Human Health Criteria.	Harmonic Mean Flow

Note to Table 4 of Paragraph (c)(2): 1. CMC (Criteria Maximum Concentration) is the water quality criteria to protect against acute effects in aquatic life and is the highest instream concentration of a priority toxic pollutant consisting of a short-term average not to be exceeded more than once every three years on the average.

2. CCC (Continuous Criteria Concentration) is the water quality criteria to protect against chronic effects in aquatic life and is the highest in stream concentration of a priority toxic pollutant consisting of a 4-day average not to be exceeded more than once every three years on the average.

3. 1 Q 10 is the lowest one day flow with an average recurrence frequency of once in 10 years determined hydrologically.

4. 1 B 3 is biologically based and indicates an allowable exceedence of once every 3 years. It is determined by EPA's computerized method (DFLOW model).

5. 7 Q 10 is the lowest average 7 consecutive day low flow with an average recurrence frequency of once in 10 years determined hydrologically.

6. 4 B 3 is biologically based and indicates an allowable exceedence for 4 consecutive days once every 3 years. It is determined by EPA's computerized method (DFLOW model).

(iv) If the State does not have such a low flow value below which numeric standards do not apply, then the criteria included in paragraph (d) of this section apply at all flows.

(v) If the CMC short-term averaging period, the CCC four-day averaging period, or once in three-year frequency is inappropriate for a criterion or the site to which a criterion applies, the State may apply to EPA for approval of an alternative averaging period, frequency, and related design flow. The State must submit to EPA the bases for any alternative averaging period, frequency, and related design flow. Before approving any change, EPA will publish for public comment, a document proposing the change.

(3) The freshwater and saltwater aquatic life criteria in the matrix in paragraph (b)(1) of this section apply as follows:

(i) For waters in which the salinity is equal to or less than 1 part per thousand 95% or more of the time, the applicable criteria are the freshwater criteria in Column B;

(ii) For waters in which the salinity is equal to or greater than 10 parts per thousand 95% or more of the time, the applicable criteria are the saltwater criteria in Column C except for selenium in the San Francisco Bay estuary where the applicable criteria are the freshwater criteria in Column B (refer to footnotes p and q to the table in paragraph (b)(1) of this section); and

(iii) For waters in which the salinity is between 1 and 10 parts per thousand as defined in paragraphs (c)(3)(i) and (ii) of this section, the applicable criteria are the more stringent of the freshwater or saltwater criteria. However, the Regional Administrator may approve the use of the alternative freshwater or saltwater criteria if scientifically defensible information and data demonstrate that on a site-specific basis the biology of the water body is dominated by freshwater aquatic life and that freshwater criteria are more appropriate; or conversely, the biology of the water body is dominated by saltwater aquatic life and that saltwater criteria are more appropriate. Before approving any change, EPA will publish for public comment a document proposing the change.

(4) *Application of metals criteria.* (i) For purposes of calculating freshwater aquatic life criteria for metals from the equations in paragraph (b)(2) of this section, for waters with a hardness of 400 mg/l or less as calcium carbonate, the actual ambient hardness of the surface water shall be used in those equations. For waters with a hardness of over 400 mg/l as calcium carbonate, a hardness of 400 mg/l as calcium carbonate shall be used with a default Water-Effect Ratio (WER) of 1, or the actual hardness of the ambient surface water shall be used with a WER. The same provisions apply for calculating the metals criteria for the comparisons provided for in paragraph (c)(3)(iii) of this section.

(ii) The hardness values used shall be consistent with the design discharge conditions established in paragraph (c)(2) of this section for design flows and mixing zones.

(iii) The criteria for metals (compounds #1—#13 in the table in paragraph (b)(1) of this section) are expressed as dissolved except where otherwise noted. For purposes of calculating aquatic life criteria for metals from the equations in footnote i to the table in paragraph (b)(1) of this section and the equations in paragraph (b)(2) of this section, the water effect ratio is generally computed as a specific pollutant's acute or chronic toxicity value measured in water from the site covered by the standard, divided by the respective acute or chronic toxicity value in laboratory dilution water. To use a water effect ratio other than the default of 1, the WER must be determined as set forth in Interim Guidance on Determination and Use of Water Effect Ratios, U.S. EPA Office of Water, EPA–823–B–94–001, February 1994, or alternatively, other scientifically defensible methods adopted by the State as part of its water quality standards program and approved by EPA. For calculation of criteria using site-specific values for both the hardness and the water effect ratio, the hardness used in the equations in paragraph (b)(2) of this section must be determined as required in paragraph (c)(4)(ii) of this section. Water hardness must be calculated from the measured calcium and magnesium ions present, and the ratio of calcium to magnesium should be approximately the same in standard laboratory toxicity testing water as in the site water.

(d)(1) Except as specified in paragraph (d)(3) of this section, all waters assigned any aquatic life or human health use classifications in the Water Quality Control Plans for the various Basins of the State ("Basin Plans") adopted by the California State Water Resources Control Board ("SWRCB"), except for ocean waters covered by the Water Quality Control Plan for Ocean Waters of California ("Ocean Plan") adopted by the SWRCB with resolution Number 90–27 on March 22, 1990, are subject to the criteria in paragraph (d)(2) of this section, without exception. These criteria apply to waters identified in the Basin Plans. More particularly, these criteria apply to waters identified in the Basin Plan chapters designating beneficial uses for waters within the region. Although the State has adopted several use designations for each of these waters, for purposes of this action, the specific standards to be applied in paragraph (d)(2) of this section are based on the presence in all waters of some aquatic life designation and the presence or absence of the MUN use designation (municipal and domestic supply). (See Basin Plans for more detailed use definitions.)

(2) The criteria from the table in paragraph (b)(1) of this section apply to the water and use classifications defined in paragraph (d)(1) of this section as follows:

Water and use classification	Applicable criteria
(i) All inland waters of the United States or enclosed bays and estuaries that are waters of the United States that include a MUN use designation.	(A) Columns B1 and B2—all pollutants (B) Columns C1 and C2—all pollutants (C) Column D1—all pollutants
(ii) All inland waters of the United States or enclosed bays and estuaries that are waters of the United States that do not include a MUN use designation.	(A) Columns B1 and B2—all pollutants (B) Columns C1 and C2—all pollutants (C) Column D2—all pollutants

(3) Nothing in this section is intended to apply instead of specific criteria, including specific criteria for the San Francisco Bay estuary, promulgated for California in the National Toxics Rule at § 131.36.

(4) The human health criteria shall be applied at the State-adopted 10 (−6) risk level.

(5) Nothing in this section applies to waters located in Indian Country.

(e)*Schedules of compliance.* (1) It is presumed that new and existing point source dischargers will promptly comply with any new or more restrictive water quality-based effluent limitations ("WQBELs") based on the water quality criteria set forth in this section.

(2) When a permit issued on or after May 18, 2000 to a new discharger contains a WQBEL based on water quality criteria set forth in paragraph (b) of this section, the permittee shall comply with such WQBEL upon the commencement of the discharge. A new discharger is defined as any building, structure, facility, or installation from which there is or may be a "discharge of pollutants" (as defined in 40 CFR 122.2) to the State of California's inland surface waters or enclosed bays and estuaries, the construction of which commences after May 18, 2000.

(3) Where an existing discharger reasonably believes that it will be infeasible to promptly comply with a new or more restrictive WQBEL based on the water quality criteria set forth in this section, the discharger may request approval from the permit issuing authority for a schedule of compliance.

(4) A compliance schedule shall require compliance with WQBELs based on water quality criteria set forth in paragraph (b) of this section as soon as possible, taking into account the dischargers' technical ability to achieve compliance with such WQBEL.

(5) If the schedule of compliance exceeds one year from the date of permit issuance, reissuance or modification, the schedule shall set forth interim requirements and dates for their achievement. The dates of completion between each requirement may not exceed one year. If the time necessary for completion of any requirement is more than one year and is not readily divisible into stages for completion, the permit shall require, at a minimum, specified dates for annual submission of progress reports on the status of interim requirements.

(6) In no event shall the permit issuing authority approve a schedule of compliance for a point source discharge which exceeds five years from the date of permit issuance, reissuance, or modification, whichever is sooner. Where shorter schedules of compliance are prescribed or schedules of compliance are prohibited by law, those provisions shall govern.

(7) If a schedule of compliance exceeds the term of a permit, interim permit limits effective during the permit shall be included in the permit and addressed in the permit's fact sheet or statement of basis. The administrative record for the permit shall reflect final permit limits and final compliance dates. Final compliance dates for final permit limits, which do not occur during the term of the permit, must occur within five years from the date of issuance, reissuance or modification of the permit which initiates the compliance schedule. Where shorter schedules of compliance are prescribed or schedules of compliance are prohibited by law, those provisions shall govern.

(8) The provisions in this paragraph (e), Schedules of compliance, shall expire on May 18, 2005.

[FR Doc. 00–11106 Filed 5–17–00; 8:45 am]
BILLING CODE 6560–50–P

TAB "34"

LEXSTAT CA. CONST ART 13B § 6

*** THIS DOCUMENT IS CURRENT THROUGH 2009-2010 EXTRAORDINARY SESSIONS 1-5, ***
7, AND 8, AND URGENCY LEGISLATION THROUGH CH 27 OF THE 2010 REGULAR SESSION

CONSTITUTION OF THE STATE OF CALIFORNIA
Article XIII B. GOVERNMENT SPENDING LIMITATION

GO TO CALIFORNIA CODES ARCHIVE DIRECTORY

Cal Const, Art. XIII B § 6 (2009)

§ 6. Reimbursement for new programs and services

(a) Whenever the Legislature or any state agency mandates a new program or higher level of service on any local government, the State shall provide a subvention of funds to reimburse that local government for the costs of the program or increased level of service, except that the Legislature may, but need not, provide a subvention of funds for the following mandates:

(1) Legislative mandates requested by the local agency affected.

(2) Legislation defining a new crime or changing an existing definition of a crime.

(3) Legislative mandates enacted prior to January 1, 1975, or executive orders or regulations initially implementing legislation enacted prior to January 1, 1975. (b)

(1) Except as provided in paragraph (2), for the 2005-06 fiscal year and every subsequent fiscal year, for a mandate for which the costs of a local government claimant have been determined in a preceding fiscal year to be payable by the State pursuant to law, the Legislature shall either appropriate, in the annual Budget Act, the full payable amount that has not been previously paid, or suspend the operation of the mandate for the fiscal year for which the annual Budget Act is applicable in a manner prescribed by law.

(2) Payable claims for costs incurred prior to the 2004-05 fiscal year that have not been paid prior to the 2005-06 fiscal year may be paid over a term of years, as prescribed by law.

(3) Ad valorem property tax revenues shall not be used to reimburse a local government for the costs of a new program or higher level of service.

(4) This subdivision applies to a mandate only as it affects a city, county, city and county, or special district.

(5) This subdivision shall not apply to a requirement to provide or recognize any procedural or substantive protection, right, benefit, or employment status of any local government employee or retiree, or of any local government employee organization, that arises from, affects, or directly relates to future, current, or past local government employment and that constitutes a mandate subject to this section. (c) A mandated new program or higher level of service includes a transfer by the Legislature from the State to cities, counties, cities and counties, or special districts of complete or partial financial responsibility for a required program for which the State previously had complete or partial financial responsibility.

HISTORY:

Adopted November 6, 1979. Amendment approved by voters, Prop. 1A, effective November 3, 2004.

NOTES:

Amendments:

2004 Amendment:

(1) Designated the former section to be subd (a); (2) generally eliminated "such" in the introductory clause of subd (a); (3) redesignated former subds (a)-(c) to be subds (a)(1)-(a)(3); (4) substituted the period for the semicolon at the end of subd (a)(1); (5) substituted the period for "; or" at the end of subd (a)(2); and (6) added subds (b) and (c).

Note

Stats 2004 ch 216 provides:

SEC. 34. Notwithstanding any other law, the Commission on State Mandates shall, on or before December 31, 2005, reconsider its decision in 97-TC-23, relating to the Standardized Testing and Reporting (STAR) program mandate, and its parameters and guidelines for calculating the state reimbursement for that mandate pursuant to *Section 6 of Article XIII B of the California Constitution* for each of the following statutes in light of federal statutes enacted and state court decisions rendered since these statutes were enacted:

(a) Chapter 975 of the Statutes of 1995.

(b) Chapter 828 of the Statutes of 1997.

(c) Chapter 576 of the Statutes of 2000.

(d) Chapter 722 of the Statutes of 2001.

Stats 2004 ch 316 provides:

SEC. 2. The Legislature hereby finds and declares that, notwithstanding a prior determination by the Board of Control, acting as the predecessor agency for the Commission on State Mandates, and pursuant to subdivision (d) of *Section 17556 of the Government Code*, the state-mandated local program imposed by Chapter 1131 of the Statutes of 1975 no longer constitutes a reimbursable mandate under *Section 6 of Article XIIIB of the California Constitution* because subdivision (e) of *Section 2207 of the Public Resources Code*, as added by Chapter 1097 of the Statutes of 1990, confers on local agencies subject to that mandate authority to levy fees sufficient to pay for the mandated program.

SEC. 3. Notwithstanding any other provision of law, by January 1, 2006, the Commission on State Mandates shall reconsider whether each of the following statutes constitutes a reimbursable mandate under *Section 6 of Article XIII B of the California Constitution* in light of federal statutes enacted and federal and state court decisions rendered since these statutes were enacted:

(a) Sex offenders: disclosure by law enforcement officers (97-TC-15; and Chapters 908 and 909 of the Statutes of 1996, Chapters 17, 80, 817, 818, 819, 820, 821, and 822 of the Statutes of 1997, and Chapters 485, 550, 927, 928, 929, and 930 of the Statutes of 1998).

(b) Extended commitment, Youth Authority (98-TC-13; and Chapter 267 of the Statutes of 1998).

(c) Brown Act Reforms (CSM-4469; and Chapters 1136, 1137, and 1138 of the Statutes of 1993, and Chapter 32 of the Statutes of 1994).

(d) Photographic Record of Evidence (No. 98-TC-07; and Chapter 875 of the Statutes of 1985, Chapter 734 of the Statutes of 1986, and Chapter 382 of the Statutes of 1990).

SEC. 4. The Legislature hereby finds and declares that the following statutes no longer constitute a reimbursable mandate under *Section 6 of Article XIIIB of the California Constitution* because provisions containing the reimbursable mandate have been repealed:

(a) Democratic Party presidential delegates (CSM-4131; and Chapter 1603 of the Statutes of 1982 and Chapter 8 of the Statutes of 1988, which enacted statutes that were repealed by Chapter 920 of the Statutes of 1994).

(b) Short-Doyle case management, Short-Doyle audits, and residential care services (CSM-4238; and Chapter 815 of the Statutes of 1979, Chapter 1327 of the Statutes of 1984, and Chapter 1352 of the Statutes of 1985, which enacted statutes that were repealed by Chapter 89 of the Statutes of 1991).

Cross References:

Appropriation and payment of amount due to cities, counties and special districts for which reimbursement is required under *Cal Const Art. XIII B § 6* as of June 30, 1995: *Gov C § 17617.*

Subvention of funds to reimburse local governments: *Gov C §§ 17500* et seq.

Collateral References:

Cal. Forms Pleading & Practice (Matthew Bender(R)) ch 466 "Public Entities And Officers: Taxpayers' Actions".

7 Witkin Summary (10th ed) Constitutional Law § 148.

9 Witkin Summary (10th ed) Taxation §§ 118, 119, 120, 121, 122.

Law Review Articles:

Educational financing mandates in California: reallocating the cost of educating immigrants between state and local governmental entities. *35 Santa Clara LR 367.*

Attorney General's Opinions:

Judicial arbitration is mandated by the Legislature for municipal courts within the meaning of *Cal Const., art. XIIIB, § 6* as to arbitration based upon stipulation or plaintiff election. It is also mandated within the meaning of Article XIIIB, § 6 as to "court ordered" arbitration resulting from a local court rule adopted after July 1, 1980, the effective date of Article XIIIB. *Cal. Const., Art. XIIIB, § 6* contemplates that the state should provide a subvention of funds to reimburse counties for the costs of the judicial arbitration in municipal courts. Reimbursement, however, is still subject to appropriation of funds by the Legislature. *64 Ops. Cal. Atty. Gen. 261.*

Commission on State Mandates does have authority to reconsider prior final decision relating to existence or nonexistence of state mandated costs, where prior decision was contrary to law. *72 Ops. Cal. Atty. Gen. 173.*

Hierarchy Notes:

Art. XIII B Note

NOTES OF DECISIONS 1. In General 2. Purpose 3. Definitions 4. Jurisdictional Issues 5. New Program Mandated 6. New Program Not Mandated 7. Other Issues

1. In General

An enactment may have an "operative" date different from its "effective" date, and does not operate retroactively merely because some of the facts or conditions upon which its application depends came into existence prior to its enactment. It should not be given a retroactive application unless it is clear that the Legislature so intended. Thus, the construction of *Cal. Const., art. XIII B, § 6*, as requiring that local governments be reimbursed for costs incurred as a result of mandates enacted between January 1, 1975 and July 1, 1980, but that reimbursement did have to begin until the latter date, which was the effective date of the statute, did not constitute an impermissible retroactive operation. The provision would operate prospectively after its effective date, albeit with respect to mandates both after that date and those in effect between January 1, 1975, and that date. *City of Sacramento v. State of California (1984, Cal App 3d Dist) 156 Cal App 3d 182, 203 Cal Rptr 258, 1984 Cal App LEXIS 2079,* overruled *County of Los Angeles v. State of California (1987) 43 Cal 3d 46, 233 Cal Rptr 38, 729 P2d 202, 1987 Cal LEXIS 273.*

Generally, principles of construction applicable to statutes are also applicable to constitutional provisions. Thus, in construing *Cal. Const., art. XIII B, § 6*, which was effective on July 1, 1980, and provided that reimbursement of local governments was required for any "new program or higher level of service" mandated by the state, but also provided that reimbursement was permissive for legislative mandates enacted prior to January 1, 1975, the proper construction was that, for legislative mandates enacted between January 1, 1975, and July 1, 1980, the "window period" of the statute, reimbursement was required but did not have to begin until the statute's effective date. This construction accorded with the rule of *expressio unius est exclusio alterius*--where the electorate had specified an exception to the general rule of mandatory reimbursement (prior to January 1, 1975), other exceptions were not to be implied or presumed. A construction that reimbursement was permissive for the window period would have rendered the exception for pre-1975 mandates meaningless. *City of Sacramento v. State of California (1984, Cal App 3d Dist) 156 Cal App 3d 182, 203 Cal Rptr 258, 1984 Cal App LEXIS 2079,* overruled *County of Los Angeles v. State of California (1987) 43 Cal 3d 46, 233 Cal Rptr 38, 729 P2d 202, 1987 Cal LEXIS 273.*

Cal. Const., art. XIII B, § 6, requiring the Legislature to reimburse local governments for expenses incurred as a result of state law, does not authorize courts to act if the Legislature fails to appropriate funds for this purpose. Although such a legislative failure might frustrate the constitutional intent, the question of whether to appropriate funds is still exclusively a matter of legislative discretion, unless the electorate directly appropriates such funds by its own vote. *City of Sacramento v. California State Legislature (1986, Cal App 3d Dist) 187 Cal App 3d 393, 231 Cal Rptr 686, 1986 Cal App LEXIS 2261.*

The subvention provisions of *Cal. Const., art. XIII B, § 6*, operate so as to require the state to reimburse counties for state-mandated costs incurred between January 1, 1975, and June 30, 1980. The amendment, which became effective on July 1, 1980, provided that the Legislature "may, but need not," provide reimbursement for mandates enacted before January 1, 1975. Nevertheless, the Legislature must reimburse mandates passed after that date, even though the state did not have to begin reimbursement until the effective date of the amendment. *Carmel Valley Fire Protection Dist. v. State of California (1987, Cal App 2d Dist) 190 Cal App 3d 521, 234 Cal Rptr 795, 1987 Cal App LEXIS 1266.*

The concepts of reimbursable state-mandated costs in Cal. Const., art. XIII B, requiring that the state reimburse local governments for the costs of state-mandated new programs or higher levels of service, and former Rev. & Tax. Code, §§ 2207, 2231, are identical. *City of Sacramento v. State of California (1990) 50 Cal 3d 51, 266 Cal Rptr 139, 785 P2d 522, 1990 Cal LEXIS 148.*

State reimbursement statute, *Gov C § 17556(d)* was facially constitutional because it did not create a new exception to reimbursement as required by *Cal Const Art XIII B § 6. County of Fresno v. State (1991) 53 Cal 3d 482, 280 Cal Rptr 92, 808 P2d 235, 1991 Cal LEXIS 1363.*

Gov C § 17500-17630 was enacted to implement *Cal Const Art XIII B § 6. County of Fresno v. State (1991) 53 Cal 3d 482, 280 Cal Rptr 92, 808 P2d 235, 1991 Cal LEXIS 1363.*

As a matter of law, no provision mandates the reimbursement of costs incurred under California Occupational Safety and Health Administration (Cal/OSHA), and thus a school district, seeking reimbursement for its expenditures complying with Cal/OSHA, had no right to reimbursement. Cal/OSHA was enacted in 1973. By its terms, *Cal. Const., art. XIII B, § 6* (reimbursement to local governments for new programs and services), enacted in 1975, allows but does not require reimbursements for funds expended complying with prior legislation. Also, the Legislature enacted reimbursement provisions in 1980 (*Gov. Code, § 17500* et seq.), and later repealed *Rev. & Tax. Code, §§ 2207.5, 2231*, also dealing with reimbursement. These legislative acts effectively preclude reimbursement for compliance with legislation enacted before 1975. *Los Angeles Unified School Dist. v. State of California (1991, Cal App 2d Dist) 229 Cal App 3d 552, 280 Cal Rptr 237, 1991 Cal App LEXIS 372.*

Since Cal. Const., art. XIII B, requiring subvention for state mandates enacted after Jan. 1, 1975, had an effective date of July 1, 1980, a local agency may seek subvention for costs imposed by legislation after Jan. 1, 1975, but reimbursement is limited to costs incurred after July 1, 1980. Reimbursement for costs incurred before July 1, 1980, must be obtained, if at all, under controlling statutory law. *Hayes v. Commission on State Mandates (1992, Cal App 3d Dist) 11 Cal App 4th 1564, 15 Cal Rptr 2d 547, 1992 Cal App LEXIS 1498.*

Since the statutory scheme (*Gov. Code, § 17500* et seq.) for resolution of state mandate claims arising under *Cal. Const., art. XIII B, § 6*, contemplates that the Legislature will appropriate funds in a claims bill to reimburse an affected entity for state-mandated expenditures made prior to its enactment, the date the Legislature deletes such funds is also the point at which a nonstatutory cause of action logically accrues for the reimbursement of expenditures that are not recoverable under the statutory procedure. *Berkeley Unified School Dist. v. State of California (1995, Cal App 3d Dist) 33 Cal App 4th 350, 39 Cal Rptr 2d 326, 1995 Cal App LEXIS 264,* review denied (1995, Cal) *1995 Cal LEXIS 4298.*

In enacting *Gov. Code, § 17500* et seq., the Legislature established the Commission on State Mandates as a quasi-judicial body to carry out a comprehensive administrative procedure for resolving claims for reimbursement of state-mandated local costs arising out of *Cal. Const., art. XIII B, § 6*. The Legislature did so because the absence of a uniform procedure had resulted in inconsistent rulings on the existence of state mandates, unnecessary litigation, reimbursement delays, and, apparently, resultant uncertainties in accommodating reimbursement requirements in the budgetary process. It is apparent from the comprehensive nature of this legislative scheme, and from the Legislature's expressed intent, that the exclusive remedy for a claimed violation of *Cal. Const., art. XIII B, § 6*, lies in these procedures. The statutes create an administrative forum for resolution of state mandate claims, and establish procedures that exist for the express purpose of avoiding multiple proceedings, judicial and administrative, addressing the same claim that a reimbursable state mandate has been created. In short, the Legislature has created what is clearly intended to be a comprehensive and exclusive procedure by which to implement and enforce *Cal. Const., art. XIII B, § 6*. Thus, the statutory scheme contemplates that the commission, as a quasi-judicial body, has the sole and exclusive authority to adjudicate whether a state mandate exists. *Redevelopment Agency v. California Comm'n on State Mandates (1996, Cal App 4th Dist) 43 Cal App 4th 1188, 51 Cal Rptr 2d 100, 1996 Cal App LEXIS 267.*

Rules of constitutional interpretation require that constitutional limitations and restrictions on legislative power are to be construed strictly and are not to be extended to include matters not covered by the language used. Policymaking authority is vested in the Legislature, and neither arguments as to the wisdom of an enactment nor questions as to the motivation of the Legislature can serve to invalidate particular legislation. Under these principles, there is no basis for applying *Cal. Const., art. XIII B, § 6*, which imposes limits on the state's authority to mandate new programs or increased services on local governmental entities, as an equitable remedy to cure the perceived unfairness resulting from political decisions on funding priorities. *City of San Jose v. State of California (1996, Cal App 6th Dist) 45 Cal App 4th 1802, 53 Cal Rptr 2d 521, 1996 Cal App LEXIS 520,* review denied (1996, Cal) *1996 Cal LEXIS 5314.*

A claimant that elects to discontinue participation in a state optional funded program does not face certain and severe penalties such as double taxation or other "draconian" consequences, but simply must adjust to the withdrawal of grant money along with the lifting of program obligations, and such circumstances do not constitute a reimbursable state mandate for purposes of *Cal. Const. art. XIII B, § 6. Department of Finance v. Commission on State Mandates (2003) 30 Cal 4th 727, 134 Cal Rptr 2d 237, 68 P3d 1203, 2003 Cal LEXIS 3353.*

Simply because a state law or order may increase the costs borne by local government in providing services, this does not necessarily establish that the law or order constitutes an increased or higher level of the resulting "service to the public" under *Cal Const Art XIII B, § 6* and *Gov C § 17514. San Diego Unified School Dist. v. Commission on State Mandates (2004) 33 Cal 4th 859, 16 Cal Rptr 3d 466, 94 P3d 589, 2004 Cal LEXIS 7079.*

2. Purpose

When the voters adopted *Cal. Const., art. XIII B, § 6* (reimbursement to local agencies for new programs and services), their intent was not to require the state to provide subvention whenever a newly enacted statute resulted incidentally in some cost to local agencies. Rather, the drafters and the electorate had in mind subvention for the expense or increased cost of programs administered locally, and for expenses occasioned by laws that impose unique requirements on local governments and do not apply generally to all state residents or entities. *County of Los Angeles v. State of California (1987) 43 Cal 3d 46, 233 Cal Rptr 38, 729 P2d 202, 1987 Cal LEXIS 273.*

The goals of *Cal. Const., art. XIII B, § 6* (reimbursement to local agencies for new programs and services), were to protect residents from excessive taxation and government spending, and to preclude a shift of financial responsibility for

governmental functions from the state to local agencies. Since these goals can be achieved in the absence of state subvention for the expense of increases in workers' compensation benefit levels for local agency employees, the adoption of art. XIII B, § 6, did not effect a pro tanto repeal of *Cal. Const., art. XIV, § 4*, which gives the Legislature plenary power over workers' compensation. *County of Los Angeles v. State of California (1987) 43 Cal 3d 46, 233 Cal Rptr 38, 729 P2d 202, 1987 Cal LEXIS 273.*

The intent of *Cal. Const., art. XIII B, § 6*, was to preclude the state from shifting to local agencies the financial responsibility for providing public services, in view of restrictions imposed on the taxing and spending power of local entities by *Cal. Const., arts. XIII A, XIII B. Lucia Mar Unified School Dist. v. Honig (1988) 44 Cal 3d 830, 244 Cal Rptr 677, 750 P2d 318, 1988 Cal LEXIS 55.*

In *Cal. Const., art. XIII B, § 6* (reimbursement of local governments for state-mandated costs or increased levels of service), "mandates" means "orders" or "commands," concepts broad enough to include executive orders as well as statutes. The concern that prompted the inclusion of § 6 in art. XIII B was the perceived attempt by the state to enact legislation or adopt administrative orders creating programs to be administered by local agencies, thereby transferring to those agencies the fiscal responsibility for providing services that the state believed should be extended to the public. It is clear that the primary concern of the voters was the increased financial burdens being shifted to local government, not the form in which those burdens appeared. *Long Beach Unified Sch. Dist. v. State of California (1990, Cal App 2d Dist) 225 Cal App 3d 155, 275 Cal Rptr 449, 1990 Cal App LEXIS 1198,* review denied (1991, Cal) *1991 Cal LEXIS 832.*

Cal. Const., art. XIII A, and art. XIII B, work in tandem, together restricting California governments' power both to levy and to spend for public purposes. Their goals are to protect residents from excessive taxation and government spending. The purpose of *Cal. Const., art. XIII B, § 6* (reimbursement to local government for state-mandated new program or higher level of service), is to preclude the state from shifting financial responsibility for carrying out governmental functions to local agencies, which are ill equipped to assume increased financial responsibilities because of the taxing and spending limitations that Cal. Const., arts. XIII A and XIII B, impose. With certain exceptions, *Cal. Const., art. XIII B, § 6*, essentially requires the state to pay for any new governmental programs, or for higher levels of service under existing programs, that it imposes upon local governmental agencies. *County of San Diego v. State of California (1997) 15 Cal 4th 68, 61 Cal Rptr 2d 134, 931 P2d 312, 1997 Cal LEXIS 630.*

The goal of Cal. Const., arts. XIII A and XIII B, is to protect California residents from excessive taxation and government spending. A central purpose of *Cal. Const., art. XIII B, § 6* (reimbursement to local government of state-mandated costs), is to prevent the state's transfer of the cost of government from itself to the local level. *Redevelopment Agency v. Commission on State Mandates (1997, Cal App 4th Dist) 55 Cal App 4th 976, 64 Cal Rptr 2d 270, 1997 Cal App LEXIS 474,* review denied (1997, Cal) *1997 Cal LEXIS 5622.*

The intent underlying Const Art XIII B § 6 was to require reimbursement to local agencies for the costs involved in carrying out functions peculiar to government, not for expenses incurred by local agencies as an incidental impact of laws that apply generally to all state residents and entities. Although a law is addressed only to local governments and imposes new costs on them, it may still not be a reimbursable state-mandate. Local entities are not entitled to reimbursement for all increased costs mandated by state law, but only those costs resulting from a new program or an increased level of service imposed upon them by the state. *City of Richmond v. Commission on State Mandates (1998, Cal App 3d Dist) 64 Cal App 4th 1190, 75 Cal Rptr 2d 754, 1998 Cal App LEXIS 546,* review denied (1998, Cal) *1998 Cal LEXIS 5509.*

Intent underlying *Cal Const Art XIII B § 6*, was to require reimbursement to local agencies for the costs involved in carrying out functions peculiar to government, not for expenses incurred by local agencies as an incidental impact of laws that apply generally to all state residents and entities. *San Diego Unified School Dist. v. Commission on State Mandates (2004) 33 Cal 4th 859, 16 Cal Rptr 3d 466, 94 P3d 589, 2004 Cal LEXIS 7079.*

3. Definitions

When a word or phrase has been given a particular meaning in one part of a law, it is to be given the same meaning in other parts of the law. Thus, in the government spending limitation provisions of Cal. Const., art. XIII B, the definition of "mandate" in § 9, subd. (b), as being an enactment that directs compliance without discretion, governed with respect to § 6, which required state reimbursement of local governments for costs of state mandated programs. *City of Sacramento v. State of California (1984, Cal App 3d Dist) 156 Cal App 3d 182, 203 Cal Rptr 258, 1984 Cal App LEXIS 2079,* overruled *County of Los Angeles v. State of California (1987) 43 Cal 3d 46, 233 Cal Rptr 38, 729 P2d 202, 1987 Cal LEXIS 273.*

The word "program," as used in *Cal. Const., art. XIII B, § 6* (reimbursement to local agencies for new programs and services), refers to programs that carry out the governmental function of providing services to the public, or laws which, to implement a state policy, impose unique requirements on local governments and do not apply generally to all residents and entities in the state. *County of Los Angeles v. State of California (1987) 43 Cal 3d 46, 233 Cal Rptr 38, 729 P2d 202, 1987 Cal LEXIS 273.*

A "new program," for purposes of determining whether the program is subject to the constitutional imperative of subvention under *Cal. Const., art. XIII B, § 6*, is one which carries out the governmental function of providing services to the public, or laws which, to implement a state policy, impose unique requirements on local governments and do not apply generally to all residents and entities in the state. *Carmel Valley Fire Protection Dist. v. State of California (1987, Cal App 2d Dist) 190 Cal App 3d 521, 234 Cal Rptr 795, 1987 Cal App LEXIS 1266.*

In *Cal. Const., art. XIII B, § 6* (reimbursement of local governments for state-mandated costs or increased levels of service), "mandates" means "orders" or "commands," concepts broad enough to include executive orders as well as statutes. The concern that prompted the inclusion of § 6 in art. XIII B was the perceived attempt by the state to enact legislation or adopt administrative orders creating programs to be administered by local agencies, thereby transferring to those agencies the fiscal responsibility for providing services that the state believed should be extended to the public. It is clear that the primary concern of the voters was the increased financial burdens being shifted to local government, not the form in which those burdens appeared. *Long Beach Unified Sch. Dist. v. State of California (1990, Cal App 2d Dist) 225 Cal App 3d 155, 275 Cal Rptr 449, 1990 Cal App LEXIS 1198,* review denied (1991, Cal) *1991 Cal LEXIS 832.*

A "new program" within the meaning of *Cal. Const., art. XIII B, § 6* (reimbursement of local governments for new programs mandated by state), is a program that carries out the governmental function of providing services to the public, or a law that, to implement state policy, imposes unique requirements on local governments and does not apply generally to all residents and entities in the state. But no state mandate exists if the requirements or provisions of a state statute are, nevertheless, required by federal law. When the federal government imposes costs on local agencies, those costs are not mandated by the state and thus do not require a state subvention. Instead, such costs are exempt from local agencies' taxing and spending limitations. This is true even though the state has adopted an implementing statute or regulation pursuant to the federal mandate, so long as the state had no true choice in the manner of implementation of the federal mandate. *County of Los Angeles v. Commission on State Mandates (1995, Cal App 2d Dist) 32 Cal App 4th 805, 38 Cal Rptr 2d 304, 1995 Cal App LEXIS 161,* review denied (1995, Cal) *1995 Cal LEXIS 3339.*

The state was not obligated to reimburse local governments by virtue of its reduction of property taxes previously allocated to local governments and its simultaneous placement of an equal amount of property tax revenues into Educational Revenue Augmentation Funds (ERAF) (former Rev & Tax C § 97.03) for distribution to school districts, since the reallocation of revenue did not result in reimbursable "costs" and the ERAF legislation did not amount to the imposition of a "new program or higher level of service" within the meaning of *Cal Const art XIII B § 6.* Section 6 subvention was intended for increases in actual costs, not lost revenue, and the state had not imposed responsibility for any program that local governments had not always had a substantial share in supporting. Nor did Proposition 98 (*Cal Const art XVI § 8*), providing a minimum level of funding for schools, confer a right of subvention on counties. Proposition 98 merely provides the formulas for determining the minimum to be appropriated every budget year. *County of Sonoma v. Commission on State Mandates (2000, Cal App 1st Dist) 84 Cal App 4th 1264, 101 Cal Rptr 2d 784, 2000 Cal App LEXIS 889,* review denied (2001, Cal) *2001 Cal LEXIS 1445.*

4. Jurisdictional Issues

The trial court had jurisdiction to adjudicate a county's mandate claim asserting the Legislature's transfer to counties of the responsibility for providing health care for medically indigent adults constituted a new program or higher level of service that required state funding under *Cal. Const., art. XIII B, § 6* (reimbursement to local government for costs of new state-mandated program), notwithstanding that a test claim was pending in an action by a different county. The trial court should not have proceeded while the other action was pending, since one purpose of the test claim procedure is to avoid multiple proceedings addressing the same claim. However, the error was not jurisdictional; the governing statutes simply vest primary jurisdiction in the court hearing the test claim. The trial court's failure to defer to the primary jurisdiction of the other court did not prejudice the state. The trial court did not usurp the Commission on State Mandates' authority, since the commission had exercised its authority in the pending action. Since the pending action was settled, no multiple decisions resulted. Nor did lack of an administrative record prejudice the state, since determining whether a statute imposes a state mandate is an issue of law. Also, attempts to seek relief from the commission would have been futile, thus triggering the futility exception to the exhaustion requirement, given that the commis-

sion rejected the other county's claim. *County of San Diego v. State of California (1997) 15 Cal 4th 68, 61 Cal Rptr 2d 134, 931 P2d 312, 1997 Cal LEXIS 630.*

5. New Program Mandated

In an action brought by a county for a writ of mandate to compel reimbursement by the state for funds expended in complying with state executive orders to provide protective clothing and equipment to county fire fighters, the trial court properly determined that the executive orders constituted the type of "new program" that was subject to the constitutional imperative of subvention under *Cal. Const., art. XIII B, § 6.* Fire protection is a peculiarly governmental function. Also, the executive orders manifest a state policy to provide updated equipment to all fire fighters, impose unique requirements on local governments, and do not apply generally to all residents and entities in the state, but only to those involved in fire fighting. *Carmel Valley Fire Protection Dist. v. State of California (1987, Cal App 2d Dist) 190 Cal App 3d 521, 234 Cal Rptr 795, 1987 Cal App LEXIS 1266.*

Ed. Code, § 59300 (requiring school districts to contribute part of the cost of educating pupils from the district at state schools for the severely handicapped), imposes on school districts a "new program or higher level of service" within the meaning of *Cal. Const., art. XIII B, § 6* (providing reimbursement to local agencies for state-mandated new programs or higher levels of service). Thus, in a test case brought by school districts, the Commission on State Mandates erred in finding to the contrary; however, remand to the commission was necessary to determine whether § 59300 was a state mandate. *Lucia Mar Unified School Dist. v. Honig (1988) 44 Cal 3d 830, 244 Cal Rptr 677, 750 P2d 318, 1988 Cal LEXIS 55.*

Stats. 1978, ch. 2, extending mandatory coverage under the state's unemployment insurance law to include state and local governments and nonprofit corporations, implemented a federal "mandate" within the meaning of Cal. Const., art. XIII B, and prior statutes restricting local taxation, and thus, subject to superseding constitutional ceilings on taxation by state and local governments, an agency governed by Stats. 1978, ch. 2, may tax and spend as necessary to meet the expenses required to comply with that legislation. In enacting Stats. 1978, ch. 2, the state simply did what was necessary to avoid certain and severe federal penalties upon its resident businesses; the alternatives were so far beyond the realm of practical reality that they left the state "without discretion" to depart from federal standards. (Disapproving, insofar as it is inconsistent with this analysis, the decision in *City of Sacramento v. State of California (1984) 156 Cal.App.3d 182, 203 Cal.Rptr. 258, 1984 Cal App LEXIS 2079.) City of Sacramento v. State of California (1990) 50 Cal 3d 51, 266 Cal Rptr 139, 785 P2d 522, 1990 Cal LEXIS 148.*

A school district was entitled to reimbursement pursuant to *Cal. Const., art. XIII B, § 6* (reimbursement of local governments for state-mandated costs or increased levels of service), for expenditures related to its efforts to alleviate racial and ethnic segregation in its schools, since an executive order (in the form of regulations issued by the state Department of Education) required a higher level of service and constituted a state mandate. The requirements of the order went beyond constitutional and case law requirements in that they required specific actions to alleviate segregation. Although under *Cal. Const., art. XIII B, § 6*, subd. (c), the state has discretion whether to reimburse pre-1975 mandates that are either statutes or executive orders implementing statutes, it cannot be inferred from this exception that reimbursability is otherwise dependent on the form of the mandate. Further, the district's claim was not defeated by *Gov. Code, § 17561, 17514*, limiting reimbursement to certain costs incurred after July 1, 1980, the effective date of Cal. Const., art. XIII B, since the limitations contained in those sections are confined to the exception contained in *Cal. Const., art. XIII B, § 6*, subd. (c). *Long Beach Unified Sch. Dist. v. State of California (1990, Cal App 2d Dist) 225 Cal App 3d 155, 275 Cal Rptr 449, 1990 Cal App LEXIS 1198,* review denied (1991, Cal) *1991 Cal LEXIS 832.*

The 1975 amendments to the federal Education of the Handicapped Act *(20 USCS § 1401* et seq.) constituted a federal mandate with respect to the state. However, even though the state had no real choice in deciding whether to comply with the act, the act did not necessarily require the state to impose all of the costs of implementation upon local school districts. To the extent the state implemented the act by freely choosing to impose new programs or higher levels of service upon local school districts, the costs of such programs or higher levels of service are state-mandated and subject to subvention under *Cal. Const., art. XIII B, § 6.* Thus, on remand of a proceeding by school districts to the Commission on State Mandates for consideration of whether special education programs constituted new programs or higher levels of service mandated by the state entitling the districts to reimbursement, the commission was required to focus on the costs incurred by local school districts and whether those costs were imposed by federal mandate or by the state's voluntary choice in its implementation of the federal program. *Hayes v. Commission on State Mandates (1992, Cal App 3d Dist) 11 Cal App 4th 1564, 15 Cal Rptr 2d 547, 1992 Cal App LEXIS 1498.*

In a county's action against the state to determine the county's rights under *Cal. Const., art. XIII B, § 6* (reimbursement to local government for state-mandated new program or higher level of service), the Legislature's 1982 transfer to counties of responsibility for providing health care for medically indigent adults mandated a reimbursable new program. The state asserted the source of the county's obligation to provide such care was *Welf. & Inst. Code, § 17000*, enacted in 1965, rather than the 1982 legislation, and since *Cal. Const., art. XIII B, § 6*, did not apply to "mandates enacted prior to January 1, 1975," there was no reimbursable mandate. However, *Welf. & Inst. Code, § 17000*, requires a county to support indigent persons only in the event they are not assisted by other sources. To the extent care was provided prior to the 1982 legislation, the county's obligation had been reduced. Also, the state's assumption of full funding responsibility prior to the 1982 legislation was not intended to be temporary. The 1978 legislation that assumed funding responsibility was limited to one year, but similar legislation in 1979 contained no such limiting language. Although the state asserted the health care program was never operated by the state, the Legislature, in adopting Medi-Cal, shifted responsibility for indigent medical care from counties to the state. Medi-Cal permitted county boards of supervisors to prescribe rules (*Welf. & Inst. Code, § 14000.2*), and Medi-Cal was administered by state departments and agencies. *County of San Diego v. State of California (1997) 15 Cal 4th 68, 61 Cal Rptr 2d 134, 931 P2d 312, 1997 Cal LEXIS 630.*

In a county's action against the state to determine the county's rights under *Cal. Const., art. XIII B, § 6* (reimbursement to local government for state-mandated new program or higher level of service), the Legislature's 1982 transfer to counties of responsibility for providing health care for medically indigent adults mandated a reimbursable new program, despite the state's assertion that the county had discretion to refuse to provide such care. While *Welf. & Inst. Code, § 17001*, confers discretion on counties to provide general assistance, there are limits to this discretion. The standards must meet the objectives of *Welf. & Inst. Code, § 17000* (counties shall relieve and support "indigent persons"), or be struck down as void by the courts. As to eligibility standards, counties must provide care to all adult medically indigent persons (MIP's). Although *Welf. & Inst. Code, § 17000*, does not define "indigent persons," the 1982 legislation made clear that adult MIP's were within this category. The coverage history of Medi-Cal demonstrates the Legislature has always viewed all adult MIP's as "indigent persons" under *Welf. & Inst. Code, § 17000*. The Attorney General also opined that the 1971 inclusion of MIP's in Medi-Cal did not alter the duty of counties to provide care to indigents not eligible for Medi-Cal, and this opinion was entitled to considerable weight. Absent controlling authority, the opinion was persuasive since it was presumed the Legislature was cognizant of the Attorney General's construction and would have taken corrective action if it disagreed. *County of San Diego v. State of California (1997) 15 Cal 4th 68, 61 Cal Rptr 2d 134, 931 P2d 312, 1997 Cal LEXIS 630.*

In a county's action against the state to determine the county's rights under *Cal. Const., art. XIII B, § 6* (reimbursement to local government for state-mandated new program or higher level of service), the Legislature's 1982 transfer to counties of responsibility for providing health care for medically indigent adults mandated a reimbursable new program, despite the state's assertion that the county had discretion to refuse to provide such care by setting its own service standards. *Welf. & Inst. Code, § 17000*, mandates that medical care be provided to indigents, and *Welf. & Inst. Code, § 10000*, requires that such care be provided promptly and humanely. There is no discretion concerning whether to provide such care. Courts construing *Welf. & Inst. Code, § 17000*, have held it imposes a mandatory duty upon counties to provide medically necessary care, not just emergency care, and it has been interpreted to impose a minimum standard of care. Until its repeal in 1992, *Health & Saf. Code, § 1442.5*, former subd. (c), also spoke to the level of services that counties had to provide under *Welf. & Inst. Code, § 17000*, requiring that the availability and quality of services provided to indigents directly by the county or alternatively be the same as that available to nonindigents in private facilities in that county. *County of San Diego v. State of California (1997) 15 Cal 4th 68, 61 Cal Rptr 2d 134, 931 P2d 312, 1997 Cal LEXIS 630.*

Ed C § 48915, insofar as it compels suspension and mandates a recommendation of expulsion for certain offenses, constitutes a "higher level of service" under *Cal Const Art XIII B, § 6*, and imposes a reimbursable state mandate for all resulting hearing costs, even those costs attributable to procedures required by federal law. *San Diego Unified School Dist. v. Commission on State Mandates (2004) 33 Cal 4th 859, 16 Cal Rptr 3d 466, 94 P3d 589, 2004 Cal LEXIS 7079.*

6. New Program Not Mandated

The provisions of *Cal. Const., art. XIII B, § 6* (reimbursement to local agencies for new programs and services), have no application to, and the state need not provide subvention for, the costs incurred by local agencies in providing to their employees the same increase in workers' compensation benefits that employees of private individuals or organizations receive. Although the state requires that employers provide workers' compensation for nonexempt categories of employees, increases in the cost of providing this employee benefit are not subject to reimbursement as state-mandated

programs or higher levels of service within the meaning of art. XIII B, § 6. Accordingly, the State Board of Control properly denied reimbursement to local governmental entities for costs incurred in providing state-mandated increases in workers' compensation benefits. (*Disapproving City of Sacramento v. State of California (1984) 156 Cal.App.3d 182, 203 Cal.Rptr. 258, 1984 Cal App LEXIS 2079,* to the extent it reached a different conclusion with respect to expenses incurred by local entities as the result of a newly enacted law requiring that all public employees be covered by unemployment insurance.)*County of Los Angeles v. State of California (1987) 43 Cal 3d 46, 233 Cal Rptr 38, 729 P2d 202, 1987 Cal LEXIS 273.*

In an administrative mandamus proceeding brought by a city to compel the State Board of Control to grant the city's claim to reimbursement for increased employer contribution rates to the Public Employees' Retirement System (PERS), attributable to transfers of reserve funds to a special temporary benefits fund pursuant to an act of the Legislature, the trial court properly denied the writ on the ground that such an increase was not reimbursable under *Cal. Const., art. XIII B, § 6*, as a state-mandated local expense. Bearing the costs of employment is not a "service" that the city is required by state law to provide in its governmental function, and where such costs as pension contributions, workers' compensation insurance, and other expenses of public employment increase incidentally to legislatively imposed changes in the operation of a state agency like PERS, reimbursement of local government employers is not compelled by the legislative purposes of § 6 (control of excessive taxation and spending, prevention of shift of financial burdens of programs from state to local governments). *City of Anaheim v. State of California (1987, Cal App 2d Dist) 189 Cal App 3d 1478, 235 Cal Rptr 101, 1987 Cal App LEXIS 1462.*

In a class action by a city on behalf of all local governments in the state against the state, in which it was alleged that Stats. 1978, ch. 2, extending mandatory coverage under the state's unemployment insurance law to include state and local governments and nonprofit corporations, mandated a new program or higher level of service on local agencies for which reimbursement by the state was required under Cal. Const., art. XIII B, the trial court did not err in granting summary judgment for the state on the ground that the local costs of providing such coverage were not subject to subvention under Cal. Const., art. XIII B, or parallel statutes (former Rev. & Tax. Code, §§ 2207, 2231, subd. (a); *Gov. Code, §§ 17514, 17561*, subd. (a)). The state had not compelled provision of new or increased "service to the public" at the local level, nor had it imposed a state policy "uniquely" on local governments. The phrase, "To force programs on local governments," in the voters' pamphlet relating to *Cal. Const., art. XIII B, § 6*, confirmed that the intent underlying that section was to require reimbursement to local agencies for the cost involved in carrying out functions peculiar to government, not for expenses incurred by local agencies as an incidental impact of laws that applied generally to all state residents and entities. *City of Sacramento v. State of California (1990) 50 Cal 3d 51, 266 Cal Rptr 139, 785 P2d 522, 1990 Cal LEXIS 148.*

The constitutional subvention provision (*Cal. Const., art. XIII B, § 6*) and the statutory provisions which preceded it do not expressly say that the state is not required to provide a subvention for costs imposed by a federal mandate. Rather, that conclusion follows from the plain language of the subvention provisions themselves. The constitutional provision requires state subvention when "the Legislature or any State agency mandates a new program or higher level of service" on local agencies. Likewise, the earlier statutory provisions required subvention for new programs or higher levels of service mandated by legislative act or executive regulation. When the federal government imposes costs on local agencies, those costs are not mandated by the state and thus would not require a state subvention. Instead, such costs are exempt from local agencies' taxing and spending limitations. This should be true even though the state has adopted an implementing statute or regulation pursuant to the federal mandate, so long as the state had no "true choice" in the manner of implementation of the federal mandate. *Hayes v. Commission on State Mandates (1992, Cal App 3d Dist) 11 Cal App 4th 1564, 15 Cal Rptr 2d 547, 1992 Cal App LEXIS 1498.*

The trial court properly denied a writ of mandate sought by a county to compel the Commission on State Mandates to vacate its determination that *Pen. Code, § 987.9* (funding by court for preparation of defense for indigent defendants in capital cases), did not constitute a state mandate, for which the state was obligated to reimburse the county pursuant to *Cal. Const., art. XIII B, § 6*. The requirements of *Pen. Code, § 987.9*, are not state mandated. Pursuant to the federal Constitution's guaranty of the right to counsel and its due process clause (U.S. Const., 6th and 14th Amends.), the right to counsel of an indigent defendant includes the right to the use of experts to assist counsel in preparing a defense. Thus, even in the absence of *Pen. Code, § 987.9*, counties would be responsible for providing ancillary services under those federal constitutional guaranties. And, even assuming that the provisions of the statute constitute a new program, it does not necessarily mean that the program is a state mandate under *Cal. Const., art. XIII B, § 6*. If a local entity has alternatives under the statute other than the mandated contribution, that contribution does not constitute a state mandate. In fact, the requirements under *Pen. Code, § 987.9*, are not mandated by the state, but rather by principles of constitutional

law and a superior court's finding of reasonableness and necessity under the statute. *County of Los Angeles v. Commission on State Mandates (1995, Cal App 2d Dist) 32 Cal App 4th 805, 38 Cal Rptr 2d 304, 1995 Cal App LEXIS 161,* review denied (1995, Cal) *1995 Cal LEXIS 3339.*

Gov. Code, § 29550, which authorizes counties to charge cities and other local entities for the costs of booking into county jails persons who had been arrested by employees of the cities and other entities, does not establish a new program or higher level of service under *Cal. Const., art. XIII B, § 6*, which imposes limits on the state's authority to mandate new programs or increased services on local governmental entities, since the shift in funding is not from the State to the local entity but from county to city. At the time *Gov. Code, § 29550*, was enacted, and long before, the financial and administrative responsibility associated with the operation of county jails and detention of prisoners was borne entirely by the county (*Gov. Code, § 29602*). In this respect, counties are not considered agents of the state. Moreover, Cal. Const., art. XIII B, treats cities and counties alike as "local government." Thus, for purposes of subvention analysis, it is clear that counties and cities were intended to be treated alike as part of "local government"; both are considered local agencies or political subdivisions of the state. Nothing in Cal. Const., art. XIII B prohibits the shifting of costs between local governmental entities. *City of San Jose v. State of California (1996, Cal App 6th Dist) 45 Cal App 4th 1802, 53 Cal Rptr 2d 521, 1996 Cal App LEXIS 520,* review denied (1996, Cal) *1996 Cal LEXIS 5314.*

Gov. Code, § 29550, which authorizes counties to charge cities and other local entities for the costs of booking into county jails persons who had been arrested by employees of the cities and other entities, does not shift costs so as to constitute a state "mandate" within the meaning of *Cal. Const., art. XIII B, § 6*, which imposes limits on the State's authority to mandate new programs or increased services on local governmental entities. The pertinent words of the statute state that "a county may impose a fee on a city." Thus, it does not require that counties impose fees on other local entities, but only authorizes them to do so. Although as a practical result of the authorization under *Gov. Code, § 29550*, a city is required to bear costs it did not formerly bear, a mandate cannot be read into language that is plainly discretionary. *Cal. Const., art. XIII B, § 6*, was not intended to entitle local entities to reimbursement for all increased costs resulting from legislative enactments, but only those costs mandated by a new program or an increased level of service imposed upon them by the *State. City of San Jose v. State of California (1996, Cal App 6th Dist) 45 Cal App 4th 1802, 53 Cal Rptr 2d 521, 1996 Cal App LEXIS 520,* review denied (1996, Cal) *1996 Cal LEXIS 5314.*

The California Commission on State Mandates properly denied a test claim brought by a city's redevelopment agency seeking a determination that the state should reimburse the agency for moneys transferred into its low- and moderate-income housing fund pursuant to *Health & Saf. Code, §§ 33334.2* and *33334.3*, which require a 20 percent deposit of the particular form of financing received by the agency, i.e., tax increment financing generated from its project areas. Under *Health & Saf. Code, § 33678*, which provides that tax increment financing is not deemed to be the "proceeds of taxes," the source of funds used by the agency was exempt from the scope of *Cal. Const., art. XIII B, § 6* (subvention). Although *Cal. Const., art. XIII B, § 6*, does not expressly discuss the source of funds used by an agency to fund a program, the historical and contextual context of this provision demonstrates that it applies only to costs recovered solely from tax revenues. Because of the nature of the financing they receive (i.e., tax increment financing), redevelopment agencies are not subject to appropriations limitations or spending caps, they do not expend any proceeds of taxes, and they do not raise general revenues for the local entity. Also, the state is not transferring any program for which it was formerly responsible. Therefore, the purposes of state subvention laws are not furthered by requiring reimbursement when redevelopment agencies are required to allocate their tax increment financing in a particular manner, as in the operation of *Health & Saf. Code, §§ 33334.2* and *33334.3. Redevelopment Agency v. Commission on State Mandates (1997, Cal App 4th Dist) 55 Cal App 4th 976, 64 Cal Rptr 2d 270, 1997 Cal App LEXIS 474,* review denied (1997, Cal) *1997 Cal LEXIS 5622.*

An amendment to *Lab C § 4707*, which eliminated local safety members of the Public Employees' Retirement System (PERS) from the coordination provisions for death benefits payable under workers' compensation and under PERS, so that the survivors of a local safety member of PERS who is killed in the line of duty receives both a death benefit under workers' compensation and a special death benefit under PERS, instead of only the latter, did not mandate a new program or higher level of service on local governments, requiring a subvention of funds to reimburse the local government under Const Art XIII B § 6. The amendment addressed death benefits, not the equipment used by local safety members. Increasing the cost of providing services could not be equated with requiring an increased level of service under Const Art XIII B § 6. A higher cost to the local government for compensating its employees is not the same as a higher cost of providing services to the public. Further, the amendment simply put local government employers on the same footing as all other nonexempt employers, requiring that they provide the workers' compensation death benefit. That the amendment affected only local government did not compel the conclusion that it imposed a unique requirement

on local government. *City of Richmond v. Commission on State Mandates (1998, Cal App 3d Dist) 64 Cal App 4th 1190, 75 Cal Rptr 2d 754, 1998 Cal App LEXIS 546,* review denied (1998, Cal) *1998 Cal LEXIS 5509.*

Legislation requiring local redevelopment agencies to contribute to a local Educational Revenue Augmentation Fund (ERAF) did not constitute a reimbursable state mandate under *Cal Const art XIIIB § 6.* The ERAF legislation was, in part, an exercise of the Legislature's authority to apportion property tax revenues; the shift of a portion of redevelopment agency funds to local schools was merely the most recent adjustment in the historical fluidity of the fiscal relationship between local governments and schools. In addition, subvention is required only when the costs in question can be recovered solely from tax revenues and here the Legislature provided that a redevelopment agency's obligations for the local ERAF fund could be paid from any legally available source. *City of El Monte v. Commission on State Mandates (2000, Cal App 3d Dist) 83 Cal App 4th 266, 99 Cal Rptr 2d 333, 2000 Cal App LEXIS 672,* review denied (2000, Cal) *2000 Cal LEXIS 8639.*

The state was not obligated to reimburse local governments by virtue of its reduction of property taxes previously allocated to local governments and its simultaneous placement of an equal amount of property tax revenues into Educational Revenue Augmentation Funds (ERAF) (former Rev & Tax C § 97.03) for distribution to school districts, since the reallocation of revenue did not result in reimbursable "costs" and the ERAF legislation did not amount to the imposition of a "new program or higher level of service" within the meaning of *Cal Const art XIII B § 6.* Section 6 subvention was intended for increases in actual costs, not lost revenue, and the state had not imposed responsibility for any program that local governments had not always had a substantial share in supporting. Nor did Proposition 98 (*Cal Const art XVI § 8*), providing a minimum level of funding for schools, confer a right of subvention on counties. Proposition 98 merely provides the formulas for determining the minimum to be appropriated every budget year. *County of Sonoma v. Commission on State Mandates (2000, Cal App 1st Dist) 84 Cal App 4th 1264, 101 Cal Rptr 2d 784, 2000 Cal App LEXIS 889,* review denied (2001, Cal) *2001 Cal LEXIS 1445.*

Domestic violence training requirement for local police officers, pursuant to *Cal. Penal Code § 13519(e)*, was not an unfunded mandate entitling a county to reimbursement from the state; police officers already had continuing education requirements, so any new costs were minimal. *County of Los Angeles v. Commission on State Mandates (2003, Cal App 2d Dist) 110 Cal App 4th 1176, 2 Cal Rptr 3d 419, 2003 Cal App LEXIS 1137.*

No hearing costs incurred in carrying out those expulsions that are discretionary under *Ed C § 48915*, including costs related to hearing procedures claimed to exceed the requirements of federal law, are reimbursable; to the extent § 48915 makes expulsions discretionary, it does not reflect a new program or a higher level of service related to an existing program. *San Diego Unified School Dist. v. Commission on State Mandates (2004) 33 Cal 4th 859, 16 Cal Rptr 3d 466, 94 P3d 589, 2004 Cal LEXIS 7079.*

Even if the hearing procedures set forth in *Ed C § 48918* constitute a new program or higher level of service, this statute does not trigger any right to reimbursement because the hearing provisions that assertedly exceed federal requirements are merely incidental to fundamental federal due process requirements and the added costs of such procedures are de minimis; all hearing procedures set forth in § 48918 properly should be considered to have been adopted to implement a federal due process mandate, and hence all such hearing costs are nonreimbursable under *Cal Const Art XIII B § 6*, and *Gov C § 17557(c). San Diego Unified School Dist. v. Commission on State Mandates (2004) 33 Cal 4th 859, 16 Cal Rptr 3d 466, 94 P3d 589, 2004 Cal LEXIS 7079.*

California Public Safety Officers Procedural Bill of Rights Act, *Gov C § 3300* et seq., is not a reimbursable mandate as to school districts and special districts that are permitted by statute, but not required, to employ peace officers who supplement the general law enforcement units of cities and counties. *Department of Finance v. Commission on State Mandates (2009, 3d Dist) 2009 Cal App LEXIS 152.*

Trial court erred in upholding the California Commission on State Mandates' determination that, as to school districts not compelled by statute to employ peace officers, the California Public Safety Officers Procedural Bill of Rights Act, *Gov C § 3300* et seq., requirements were a reimbursable state mandate where its judgment rested on the insupportable legal conclusion that the districts, identified in *Gov C § 3301*, were as a practical matter compelled to exercise their authority to hire peace officers; districts in issue were authorized, but not required, to provide their own peace officers and did not have provision of police protection as an essential and basic function. *Department of Finance v. Commission on State Mandates (2009, 3d Dist) 2009 Cal App LEXIS 152.*

To the extent that *Gov. Code, § 17556*, subd. (f), as amended, provides that the state need not reimburse local governments for imposing duties that are expressly included in or necessary to implement a ballot measure, the statute is

consistent with *Cal. Const., art. XIII B, § 6*. However, any duty not expressly included in or necessary to implement the ballot measure gives rise to a reimbursable state mandate, even if the duty is reasonably within the scope of the ballot measure. *California School Boards Assn. v. State of California (2009, 3d Dist) 2009 Cal App LEXIS 302.*

"Necessary to implement" language of *Gov. Code, § 17556*, subd. (f), is consistent with *Cal. Const., art. XIII B, § 6*, because it denies reimbursement only to the extent that costs imposed by a statute are necessary to implement a ballot measure; therefore, the "necessary to implement" language of the statute does not violate *Cal. Const., art. XIII B, § 6. California School Boards Assn. v. State of California (2009, 3d Dist) 2009 Cal App LEXIS 302.*

To the extent that *Gov. Code, § 17556*, subd. (f), as amended, allows the legislature to impose on local governments nonreimbursable costs resulting from duties that are necessary to implement or expressly included in a ballot measure, it does not violate *Cal. Const., art. XIII B, § 6*; however, additional language declaring that no reimbursement is necessary for duties that are reasonably within the scope of a ballot measure is impermissibly broad because it allows for denial of reimbursement when reimbursement is required by *Cal. Const., art. XIII B, § 6. California School Boards Assn. v. State of California (2009, 3d Dist) 2009 Cal App LEXIS 302.*

7. Other Issues

Because *Gov C § 17516(c)* was unconstitutional to the extent that it exempted regional water quality control boards from the constitutional state mandate subvention requirement, a trial court properly issued a writ of mandate directing the California Commission on State Mandates to resolve, on the merits and without reference to § 17516(c), test claims presented by a county and several cities seeking reimbursement for carrying out obligations required by a National Pollutant Discharge Elimination System Permit for municipal stormwater and urban runoff discharges that was issued by a regional water quality control board. *County of Los Angeles v. Commission on State Mandates (2007, Cal App 2d Dist) 150 Cal App 4th 898, 58 Cal Rptr 3d 762, 2007 Cal App LEXIS 711.*

Gov C § 17516c is unconstitutional to the extent that it purports to exempt orders issued by regional water quality control boards from the definition of "executive orders" for which subvention of funds to local governments for carrying out state mandates is required pursuant to *Cal Const Art XIII B, § 6* because the exemption contravenes the clear, unequivocal intent of *Cal Const Art XIII B, § 6* that subvention of funds was required whenever any state agency mandated a new program or higher level of service on any local government, and whether one or both of the subject two obligations constitutes a state mandate necessitating subvention of funds under *Cal Const Art XIII B, § 6* is an issue that must in the first instance be resolved by the California Commission on State Mandates. Moreover, a contrary conclusion is not compelled by virtue of the fact that Gov C § 17516c essentially mirrors the language of *Rev & Tax C § 2209(c)* because a statute cannot trump the constitution. *County of Los Angeles v. Commission on State Mandates (2007, Cal App 2d Dist) 150 Cal App 4th 898, 58 Cal Rptr 3d 762, 2007 Cal App LEXIS 711.*

Under *Rev. & Tax. Code, § 2231*, subd. (a), requiring the state to reimburse local agencies for all costs mandated by the state, as defined in *Rev. & Tax. Code, § 2207*, subd. (a), defining such costs as any increased costs a local agency is required to incur as a result of any law enacted after January 1, 1973, the Legislature had a statutory duty to reimburse two counties for all state-mandated costs incurred after the 1974-75 fiscal year pursuant to Stats. 1974, ch. 1392 (*Gov. Code, § 23300* et seq.) in connection with the defeat of four proposed new counties. Although *Cal. Const., art. XIII B, § 6*, subd. (c), approved in 1980, provided the Legislature may, but need not, reimburse local governments for costs of legislative mandates enacted prior to January 1, 1975, the Legislature in 1980 amended *Rev. & Tax. Code, § 2207*, thereby reaffirming its statutory obligation to reimburse local agencies for the costs defined in § 2207, subd. (a), which constituted the exercise of legislative discretion authorized by *Cal. Const., art. XIII B, § 6*, subd. (c). The mandatory provisions of *Rev. & Tax. Code, § 2231*, do not restrict legislative power, and the Legislature is free to amend or repeal it as it applies to pre-1975 legislative mandates. *County of Los Angeles v. State of California (1984, Cal App 2d Dist) 153 Cal App 3d 568, 200 Cal Rptr 394, 1984 Cal App LEXIS 1807.*

The Legislature's initial appropriation to reimburse counties for the costs of *Pen. Code, § 987.9* (funding by court for preparation of defense for indigent defendants in capital cases), was not a final and unchallengeable determination that the statute constitutes a state mandate, nor did the Commission on State Mandates err in finding that the statute is not a state mandate, despite the Legislature's finding to the contrary in a later appropriations bill. The commission was not bound by the Legislature's determination, and it had discretion to determine whether a state mandate existed. The comprehensive administrative procedures for resolution of claims arising out of *Cal. Const., art. XIII B, § 6* (*Gov. Code, § 17500* et seq.), are the exclusive procedures by which to implement and enforce the constitutional provision. Thus, the commission, as a quasi-judicial body, has the sole and exclusive authority to adjudicate whether a state mandate exists.

Any legislative findings are irrelevant to the issue of whether a state mandate exists, and the commission properly determined that no such mandate existed. In any event, the Legislature itself ceased to regard the provisions of *Pen. Code, § 987.9*, as a state mandate in 1983. *County of Los Angeles v. Commission on State Mandates (1995, Cal App 2d Dist) 32 Cal App 4th 805, 38 Cal Rptr 2d 304, 1995 Cal App LEXIS 161,* review denied (1995, Cal) *1995 Cal LEXIS 3339.*

School districts, which sought reimbursement pursuant to *Cal. Const., art. XIII B, § 6*, for the costs of a state mandated desegregation program, waived their nonstatutory remedy for such costs incurred after the Legislature deleted funds in a claims bill to pay for the costs, since their statutory cause of action under *Gov. Code, § 17612*, accrued on that date and they could have avoided the imposition of state mandated costs at any time after that cause of action accrued by timely use of the statutory remedy. *Gov. Code, § 17612*, provides, as to future state mandated expenditures, an efficacious procedure for the implementation of local agency rights under *Cal. Const., art. XIII B, § 6*. Thus, as to such expenditures, the exercise of the constitutional right to avoid involuntary expenditures is not unduly restricted. There is no statutory remedy of reimbursement of state mandated expenditures that could have been prevented after funding has been deleted from the local government claims bill. The courts accordingly must limit the remedy for future expenditures to the procedures established by the Legislature in *Gov. Code, § 17612*. It follows that any claim to reimbursement of subsequent costs is waived by the failure to seek the relief provided by that statute. *Berkeley Unified School Dist. v. State of California (1995, Cal App 3d Dist) 33 Cal App 4th 350, 39 Cal Rptr 2d 326, 1995 Cal App LEXIS 264,* review denied (1995, Cal) *1995 Cal LEXIS 4298.*

The judicially created remedy to enforce the right of local entities arising under *Cal. Const., art. XIII B, § 6*, to reimbursement for the costs of state-mandated programs is subject to the four-year limitations period provided in *Code Civ. Proc., § 343* (action for relief for which no period of limitations previously provided). *Berkeley Unified School Dist. v. State of California (1995, Cal App 3d Dist) 33 Cal App 4th 350, 39 Cal Rptr 2d 326, 1995 Cal App LEXIS 264,* review denied (1995, Cal) *1995 Cal LEXIS 4298.*

A cause of action by school districts for reimbursement pursuant to *Cal. Const., art. XIII B, § 6*, for the costs of a state-mandated desegregation program accrued, pursuant to *Gov. Code, § 17612*, on the date the Legislature deleted funds in a claims bill to pay for the costs, and accrual was not postponed until the statute of limitations had run on the state's right to judicial review of an administrative determination in a test claim that there was a state mandate or until final judgment in any litigation brought by the test claimant or the state. Although the administrative decision in the test claim was not yet free of direct attack, under the doctrine of exhaustion of administrative remedies, judicial interference is withheld only until the administrative process has run its course, and that had occurred when, in the test claim case, the administrative agency had approved the claim that the desegregation regulations imposed a state mandate and issued guidelines for reimbursement for the claimed expenditures from the Legislature. *Gov. Code, § 17612*, implies that judicial interference must be withheld until the narrowly prescribed legislative process has also run its course. It does not imply that the judicial forum is unavailable thereafter. *Berkeley Unified School Dist. v. State of California (1995, Cal App 3d Dist) 33 Cal App 4th 350, 39 Cal Rptr 2d 326, 1995 Cal App LEXIS 264,* review denied (1995, Cal) *1995 Cal LEXIS 4298.*

In administrative mandamus proceedings by a city's redevelopment agency against the Commission on State Mandates to challenge the commission's ruling that the agency was not entitled to reimbursement for housing costs the agency incurred (*Cal. Const., art. XIII B, § 6*; *Gov. Code, § 17550* et seq.; *Health & Saf. Code, §§ 33334.2, 33334.3*), the trial court erred in denying the Department of Finance's motion to intervene. The department and the commission are not merely two agents of the state representing the same interests. Separate statutory schemes create and govern the department and the commission, and since the department is authorized to sue the commission (*Gov. Code, §§ 13070, 17559*), it is more like an adversary party than it is an equivalent to the commission itself. Moreover, the commission is a quasi-judicial body that hears both sides of the dispute. In light of the department's right to notice and participation in the administrative hearings before the commission, and in light of its duty to supervise the financial policies of the state (*Gov. Code, § 13070*), the relief requested by the agency, subvention of state funds, would have affected the interests of the department. Thus, the department was a real party in interest, and should have been named in the agency's writ petition. It was an indispensable party under *Code Civ. Proc., § 389*, subd. (a), and it had an interest against the success of the agency on its subvention claim (*Code Civ. Proc., § 387*, subd. (a)). Also, a ruling in the department's absence could have impaired its ability to protect its interests in the subject matter of the action (*Code Civ. Proc., § 387*, subd. (b)). *Redevelopment Agency v. California Comm'n on State Mandates (1996, Cal App 4th Dist) 43 Cal App 4th 1188, 51 Cal Rptr 2d 100, 1996 Cal App LEXIS 267.*

The Legislative Counsel's determination that *Gov. Code, § 29550*, which authorizes counties to charge cities and other local entities for the costs of booking into county jails persons who had been arrested by employees of the cities

and other entities, imposed a state mandated local program was not determinative of the ultimate issue whether the enactment constituted a state mandate under *Cal. Const., art. XIII B, § 6*. The legislative scheme contained in *Gov. Code, § 17500* et seq., makes clear that this issue is to be decided by the State Commission on Mandates. The statutory scheme contemplates that the commission, as a quasi-judicial body, has the sole and exclusive authority to adjudicate whether a state mandate exists. Thus, any legislative findings are irrelevant to the issue of whether a state mandate exists. *City of San Jose v. State of California (1996, Cal App 6th Dist) 45 Cal App 4th 1802, 53 Cal Rptr 2d 521, 1996 Cal App LEXIS 520,* review denied (1996, Cal) *1996 Cal LEXIS 5314.*

In a county's action against the state to determine the county's rights under *Cal. Const., art. XIII B, § 6* (reimbursement to local government for state-mandated new program or higher level of service), after the Commission on State Mandates indicated the Legislature's 1982 transfer to counties of the responsibility for providing health care for medically indigent adults did not mandate a reimbursable new program, a mandamus proceeding under *Code Civ. Proc., § 1085*, was not an improper vehicle for challenging the commission's position. Mandamus under *Code Civ. Proc., § 1094.5*, commonly denominated "administrative" mandamus, is mandamus still. The full panoply of rules applicable to ordinary mandamus applies to administrative mandamus proceedings, except where they are modified by statute. Where entitlement to mandamus relief is adequately alleged, a trial court may treat a proceeding under *Code Civ. Proc., § 1085*, as one brought under *Code Civ. Proc., § 1094.5*, and should overrule a demurrer asserting that the wrong mandamus statute has been invoked. In any event, the determination whether the statutes at issue established a mandate under *Cal. Const., art. XIII B, § 6*, was a question of law. Where a purely legal question is at issue, courts exercise independent judgment, no matter whether the issue arises by traditional or administrative mandate. *County of San Diego v. State of California (1997) 15 Cal 4th 68, 61 Cal Rptr 2d 134, 931 P2d 312, 1997 Cal LEXIS 630.*

TAB "35"

Cal Gov Code § 17500 (2010)
§ 17500. Legislative findings and declarations

The Legislature finds and declares that the existing system for reimbursing local agencies and school districts for the costs of state-mandated local programs has not provided for the effective determination of the state's responsibilities under Section 6 of Article XIIIB of the California Constitution. The Legislature finds and declares that the failure of the existing process to adequately and consistently resolve the complex legal questions involved in the determination of state-mandated costs has led to an increasing reliance by local agencies and school districts on the judiciary and, therefore, in order to relieve unnecessary congestion of the judicial system, it is necessary to create a mechanism which is capable of rendering sound quasi-judicial decisions and providing an effective means of resolving disputes over the existence of state-mandated local programs.

It is the intent of the Legislature in enacting this part to provide for the implementation of Section 6 of Article XIIIB of the California Constitution. Further, the Legislature intends that the Commission on State Mandates, as a quasi-judicial body, will act in a deliberative manner in accordance with the requirements of Section 6 of Article XIIIB of the California Constitution.

Cal Gov Code § 17500

TAB "36"

Cal Gov Code § 17514 (2010)
§ 17514. "Costs mandated by the state"

"Costs mandated by the state" means any increased costs which a local agency or school district is required to incur after July 1, 1980, as a result of any statute enacted on or after January 1, 1975, or any executive order implementing any statute enacted on or after January 1, 1975, which mandates a new program or higher level of service of an existing program within the meaning of Section 6 of Article XIIIB of the California Constitution.

Cal Gov Code § 17514

TAB "37"

Cal Gov Code § 17556 (2010)
§ 17556. Criteria for not finding costs mandated by state

The commission shall not find costs mandated by the state, as defined in Section 17514, in any claim submitted by a local agency or school district, if, after a hearing, the commission finds any one of the following:

(a) The claim is submitted by a local agency or school district that requested legislative authority for that local agency or school district to implement the program specified in the statute, and that statute imposes costs upon that local agency or school district requesting the legislative authority. A resolution from the governing body or a letter from a delegated representative of the governing body of a local agency or school district that requests authorization for that local agency or school district to implement a given program shall constitute a request within the meaning of this subdivision.

(b) The statute or executive order affirmed for the state a mandate that had been declared existing law or regulation by action of the courts.

(c) The statute or executive order imposes a requirement that is mandated by a federal law or regulation and results in costs mandated by the federal government, unless the statute or executive order mandates costs that exceed the mandate in that federal law or regulation. This subdivision applies regardless of whether the federal law or regulation was enacted or adopted prior to or after the date on which the state statute or executive order was enacted or issued.

(d) The local agency or school district has the authority to levy service charges, fees, or assessments sufficient to pay for the mandated program or increased level of service.

(e) The statute, executive order, or an appropriation in a Budget Act or other bill provides for offsetting savings to local agencies or school districts that result in no net costs to the local agencies or school districts, or includes additional revenue that was specifically intended to fund the costs of the state mandate in an amount sufficient to fund the cost of the state mandate.

(f) The statute or executive order imposes duties that are necessary to implement, reasonably within the scope of, or expressly included in, a ballot measure approved by the voters in a statewide or local election. This subdivision applies regardless of whether the statute or executive order was enacted or adopted before or after the date on which the ballot measure was approved by the voters.

(g) The statute created a new crime or infraction, eliminated a crime or infraction, or changed the penalty for a crime or infraction, but only for that portion of the statute relating directly to the enforcement of the crime or infraction.

TAB "38"

LEXSTAT CALIFORNIA WATER CODE 13000

*** THIS DOCUMENT IS CURRENT THROUGH 2009-2010 EXTRAORDINARY SESSIONS 1-5, ***
7, AND 8, AND URGENCY LEGISLATION THROUGH CH 27 OF THE 2010 REGULAR SESSION

WATER CODE
Division 7. Water Quality
Chapter 1. Policy

GO TO CALIFORNIA CODES ARCHIVE DIRECTORY

Cal Wat Code § 13000 (2010)

§ 13000. Legislative findings and declarations

The Legislature finds and declares that the people of the state have a primary interest in the conservation, control, and utilization of the water resources of the state, and that the quality of all the waters of the state shall be protected for use and enjoyment by the people of the state.

The Legislature further finds and declares that activities and factors which may affect the quality of the waters of the state shall be regulated to attain the highest water quality which is reasonable, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible.

The Legislature further finds and declares that the health, safety and welfare of the people of the state requires that there be a statewide program for the control of the quality of all the waters of the state; that the state must be prepared to exercise its full power and jurisdiction to protect the quality of waters in the state from degradation originating inside or outside the boundaries of the state; that the waters of the state are increasingly influenced by interbasin water development projects and other statewide considerations; that factors of precipitation, topography, population, recreation, agriculture, industry and economic development vary from region to region within the state; and that the statewide program for water quality control can be most effectively administered regionally, within a framework of statewide coordination and policy.

HISTORY:

Added Stats 1969 ch 482 § 18, operative January 1, 1970.

TAB "39"

LEXSTAT CAL WAT CODE § 13001

*** THIS DOCUMENT IS CURRENT THROUGH 2009-2010 EXTRAORDINARY SESSIONS 1-5, ***
7, AND 8, AND URGENCY LEGISLATION THROUGH CH 27 OF THE 2010 REGULAR SESSION

WATER CODE
Division 7. Water Quality
Chapter 1. Policy

GO TO CALIFORNIA CODES ARCHIVE DIRECTORY

Cal Wat Code § 13001 (2009)

§ 13001. Power and duty of state board and regional boards

It is the intent of the Legislature that the state board and each regional board shall be the principal state agencies with primary responsibility for the coordination and control of water quality. The state board and regional boards in exercising any power granted in this division shall conform to and implement the policies of this chapter and shall, at all times, coordinate their respective activities so as to achieve a unified and effective water quality control program in this state.

HISTORY:

Added Stats 1969 ch 482 § 18, operative January 1, 1970.

TAB "40"

LEXSTAT CAL WAT CODE § 13050

*** THIS DOCUMENT IS CURRENT THROUGH 2009-2010 EXTRAORDINARY SESSIONS 1-5, ***
7, AND 8, AND URGENCY LEGISLATION THROUGH CH 27 OF THE 2010 REGULAR SESSION

WATER CODE
Division 7. Water Quality
Chapter 2. Definitions

GO TO CALIFORNIA CODES ARCHIVE DIRECTORY

Cal Wat Code § 13050 (2010)

§ 13050. Terms used in this division

As used in this division:

(a) "State board" means the State Water Resources Control Board.

(b) "Regional board" means any California regional water quality control board for a region as specified in Section 13200.

(c) "Person" includes any city, county, district, the state, and the United States, to the extent authorized by federal law.

(d) "Waste" includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal.

(e) "Waters of the state" means any surface water or groundwater, including saline waters, within the boundaries of the state.

(f) "Beneficial uses" of the waters of the state that may be protected against quality degradation include, but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.

(g) "Quality of the water" refers to chemical, physical, biological, bacteriological, radiological, and other properties and characteristics of water which affect its use.

(h) "Water quality objectives" means the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area.

(i) "Water quality control" means the regulation of any activity or factor which may affect the quality of the waters of the state and includes the prevention and correction of water pollution and nuisance.

(j) "Water quality control plan" consists of a designation or establishment for the waters within a specified area of all of the following:

(1) Beneficial uses to be protected.

(2) Water quality objectives.

(3) A program of implementation needed for achieving water quality objectives.

(k) "Contamination" means an impairment of the quality of the waters of the state by waste to a degree which creates a hazard to the public health through poisoning or through the spread of disease. "Contamination" includes any equivalent effect resulting from the disposal of waste, whether or not waters of the state are affected.

(l)

(1) "Pollution" means an alteration of the quality of the waters of the state by waste to a degree which unreasonably affects either of the following:

(A) The waters for beneficial uses.

(B) Facilities which serve these beneficial uses.

(2) "Pollution" may include "contamination."

(m) "Nuisance" means anything which meets all of the following requirements:

(1) Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.

(2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.

(3) Occurs during, or as a result of, the treatment or disposal of wastes.

(n) "Recycled water" means water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefor considered a valuable resource.

(o) "Citizen or domiciliary" of the state includes a foreign corporation having substantial business contacts in the state or which is subject to service of process in this state.

(p)

(1) "Hazardous substance" means either of the following:

(A) For discharge to surface waters, any substance determined to be a hazardous substance pursuant to Section 311(b)(2) of the Federal Water Pollution Control Act *(33 U.S.C. Sec. 1251* et seq.).

(B) For discharge to groundwater, any substance listed as a hazardous waste or hazardous material pursuant to *Section 25140 of the Health and Safety Code*, without regard to whether the substance is intended to be used, reused, or discarded, except that "hazardous substance" does not include any substance excluded from Section 311(b)(2) of the Federal Water Pollution Control Act because it is within the scope of Section 311(a)(1) of that act.

(2) "Hazardous substance" does not include any of the following:

(A) Nontoxic, nonflammable, and noncorrosive stormwater runoff drained from underground vaults, chambers, or manholes into gutters or storm sewers.

(B) Any pesticide which is applied for agricultural purposes or is applied in accordance with a cooperative agreement authorized by *Section 116180 of the Health and Safety Code*, and is not discharged accidentally or for purposes of disposal, the application of which is in compliance with all applicable state and federal laws and regulations.

(C) Any discharge to surface water of a quantity less than a reportable quantity as determined by regulations issued pursuant to Section 311(b)(4) of the Federal Water Pollution Control Act.

(D) Any discharge to land which results, or probably will result, in a discharge to groundwater if the amount of the discharge to land is less than a reportable quantity, as determined by regulations adopted pursuant to Section 13271, for substances listed as hazardous pursuant to *Section 25140 of the Health and Safety Code.* No discharge shall be deemed a discharge of a reportable quantity until regulations set a reportable quantity for the substance discharged.

(q)

(1) "Mining waste" means all solid, semisolid, and liquid waste materials from the extraction, beneficiation, and processing of ores and minerals. Mining waste includes, but is not limited to, soil, waste rock, and overburden, as defined in *Section 2732 of the Public Resources Code*, and tailings, slag, and other processed waste materials, including cementitious materials that are managed at the cement manufacturing facility where the materials were generated.

(2) For the purposes of this subdivision, "cementitious material" means cement, cement kiln dust, clinker, and clinker dust.

(r) "Master recycling permit" means a permit issued to a supplier or a distributor, or both, of recycled water, that includes waste discharge requirements prescribed pursuant to Section 13263 and water recycling requirements prescribed pursuant to Section 13523.1.

HISTORY:

Added Stats 1969 ch 482 § 18, operative January 1, 1970. Amended Stats 1969 ch 800 § 2.5; Stats 1970 ch 202 § 1; Stats 1980 ch 877 § 1; Stats 1989 ch 642 § 2; Stats 1991 ch 187 § 1 (AB 673); Stats 1992 ch 211 § 1 (AB 3012); Stats 1995 ch 28 § 17 (AB 1247), ch 847 § 2 (SB 206); Stats 1996 ch 1023 § 429 (SB 1497), effective September 29, 1996.

TAB "41"

LEXSTAT CAL WAT CODE § 13140

*** THIS DOCUMENT IS CURRENT THROUGH 2009-2010 EXTRAORDINARY SESSIONS 1-5, ***
7, AND 8, AND URGENCY LEGISLATION THROUGH CH 27 OF THE 2010 REGULAR SESSION

WATER CODE
Division 7. Water Quality
Chapter 3. State Water Quality Control
Article 3. State Policy for Water Quality Control

GO TO CALIFORNIA CODES ARCHIVE DIRECTORY

Cal Wat Code § 13140 (2009)

§ 13140. State board's adoption of policy

The state board shall formulate and adopt state policy for water quality control. Such policy shall be adopted in accordance with the provisions of this article and shall be in conformity with the policies set forth in Chapter 1 (commencing with Section 13000).

HISTORY:

Added Stats 1969 ch 482 § 18, operative January 1, 1970.

TAB "42"

LEXSTAT CAL WAT CODE § 13240

*** THIS DOCUMENT IS CURRENT THROUGH 2009-2010 EXTRAORDINARY SESSIONS 1-5, ***
7, AND 8, AND URGENCY LEGISLATION THROUGH CH 27 OF THE 2010 REGULAR SESSION

WATER CODE
Division 7. Water Quality
Chapter 4. Regional Water Quality Control
Article 3. Regional Water Quality Control Plans

GO TO CALIFORNIA CODES ARCHIVE DIRECTORY

Cal Wat Code § 13240 (2009)

§ 13240. Formulation, adoption, and revision of plans

Each regional board shall formulate and adopt water quality control plans for all areas within the region. Such plans shall conform to the policies set forth in Chapter 1 (commencing with Section 13000) of this division and any state policy for water quality control. During the process of formulating such plans the regional boards shall consult with and consider the recommendations of affected state and local agencies. Such plans shall be periodically reviewed and may be revised.

HISTORY:

Added Stats 1969 ch 482 § 18, operative January 1, 1970.

TAB "43"

Cal Wat Code § 13263 (2009)
§ 13263. Requirements prescribed by board; Review, revision, and notice; Absence of vested right to discharge waste

(a) The regional board, after any necessary hearing, shall prescribe requirements as to the nature of any proposed discharge, existing discharge, or material change in an existing discharge, except discharges into a community sewer system, with relation to the conditions existing in the disposal area or receiving waters upon, or into which, the discharge is made or proposed. The requirements shall implement any relevant water quality control plans that have been adopted, and shall take into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of Section 13241.

(b) A regional board, in prescribing requirements, need not authorize the utilization of the full waste assimilation capacities of the receiving waters.

(c) The requirements may contain a time schedule, subject to revision in the discretion of the board.

(d) The regional board may prescribe requirements although no discharge report has been filed.

(e) Upon application by any affected person, or on its own motion, the regional board may review and revise requirements. All requirements shall be reviewed periodically.

(f) The regional board shall notify in writing the person making or proposing the discharge or the change therein of the discharge requirements to be met. After receipt of the notice, the person so notified shall provide adequate means to meet the requirements.

(g) No discharge of waste into the waters of the state, whether or not the discharge is made pursuant to waste discharge requirements, shall create a vested right to continue the discharge. All discharges of waste into waters of the state are privileges, not rights.

(h) The regional board may incorporate the requirements prescribed pursuant to this section into a master recycling permit for either a supplier or distributor, or both, of recycled water.

(i) The state board or a regional board may prescribe general waste discharge requirements for a category of discharges if the state board or that regional board finds or determines that all of the following criteria apply to the discharges in that category:

(1) The discharges are produced by the same or similar operations.

(2) The discharges involve the same or similar types of waste.

(3) The discharges require the same or similar treatment standards.

(4) The discharges are more appropriately regulated under general discharge requirements than individual discharge requirements.

(j) The state board, after any necessary hearing, may prescribe waste discharge requirements in accordance with this section.

Cal Wat Code § 13263

TAB "44"

Cal Wat Code § 13370 (2009)
§ 13370. Public interest in state implementation of provisions of federal act, etc.

The Legislature finds and declares as follows:

(a) The Federal Water Pollution Control Act (33 U.S.C. Sec. 1251 et seq.), as amended, provides for permit systems to regulate the discharge of pollutants and dredged or fill material to the navigable waters of the United States and to regulate the use and disposal of sewage sludge.

(b) The Federal Water Pollution Control Act, as amended, provides that permits may be issued by states which are authorized to implement the provisions of that act.

(c) It is in the interest of the people of the state, in order to avoid direct regulation by the federal government of persons already subject to regulation under state law pursuant to this division, to enact this chapter in order to authorize the state to implement the provisions of the Federal Water Pollution Control Act and acts amendatory thereof or supplementary thereto, and federal regulations and guidelines issued pursuant thereto, provided, that the state board shall request federal funding under the Federal Water Pollution Control Act for the purpose of carrying out its responsibilities under this program.

Cal Wat Code § 13370

SECTION 7 –

DOCUMENTATION

IN SUPPORT OF TEST CLAIMS IN RE SANTA ANA RWQCB

ORDER NO. R8-2009-0030

(NPDES NO. CAS618030)

VOLUME III

MISCELLANEOUS AUTHORITIES

(Exhibits 1 – 12)

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VOLUMES III AND IV – MISCELLANEOUS AUTHORITIES

VOLUME III

INDEX TO SECTION 7 DOCUMENTATION

MISCELLANEOUS AUTHORITIES

DOCUMENT	EXH. NO.
EPA's Economic Analysis of the California Toxic Rule, October 1999	15.
State Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays and Estuaries in California (State Implementation Plan)	16.
California Regional Water Quality Control Board (Santa Ana Region) Order No. R8-2010-0033 (January 29, 2010)	17.
San Diego Regional Board Staff Report re: *Comparison Between the Requirements of Tentative Order 2001-01, the Federal NPDES Storm Water Regulations, the Existing San Diego Municipal Storm Water Permit (Order 90-42), and Previous Drafts of the San Diego Municipal Storm Water Permit*	18.

EXHIBIT "1"

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

NOV 22 2002

OFFICE OF WATER

MEMORANDUM

SUBJECT: Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs

FROM: Robert H. Wayland, III, Director
Office of Wetlands, Oceans and Watersheds

James A. Hanlon, Director
Office of Wastewater Management

TO: Water Division Directors
Regions 1 - 10

This memorandum clarifies existing EPA regulatory requirements for, and provides guidance on, establishing wasteload allocations (WLAs) for storm water discharges in total maximum daily loads (TMDLs) approved or established by EPA. It also addresses the establishment of water quality-based effluent limits (WQBELs) and conditions in National Pollutant Discharge Elimination System (NPDES) permits based on the WLAs for storm water discharges in TMDLs. The key points presented in this memorandum are as follows:

NPDES-regulated storm water discharges must be addressed by the wasteload allocation component of a TMDL. See 40 C.F.R. § 130.2(h).

NPDES-regulated storm water discharges may not be addressed by the load allocation (LA) component of a TMDL. See 40 C.F.R. § 130.2 (g) & (h).

Storm water discharges from sources that are not currently subject to NPDES regulation may be addressed by the load allocation component of a TMDL. See 40 C.F.R. § 130.2(g).

It may be reasonable to express allocations for NPDES-regulated storm water discharges from multiple point sources as a single categorical wasteload allocation when data and information are insufficient to assign each source or outfall individual WLAs. See 40 C.F.R. § 130.2(i). In cases where wasteload allocations

are developed for categories of discharges, these categories should be defined as narrowly as available information allows.

The WLAs and LAs are to be expressed in numeric form in the TMDL. See 40 C.F.R. § 130.2(h) & (i). EPA expects TMDL authorities to make separate allocations to NPDES- regulated storm water discharges (in the form of WLAs) and unregulated storm water (in the form of LAs). EPA recognizes that these allocations might be fairly rudimentary because of data limitations and variability in the system.

NPDES permit conditions must be consistent with the assumptions and requirements of available WLAs. See 40 C.F.R. § 122.44(d)(1)(vii)(B).

WQBELs for NPDES-regulated storm water discharges that implement WLAs in TMDLs may be expressed in the form of best management practices (BMPs) under specified circumstances. See 33 U.S.C. §1342(p)(3)(B)(iii); 40 C.F.R. §122.44(k)(2)&(3). If BMPs alone adequately implement the WLAs, then additional controls are not necessary.

EPA expects that most WQBELs for NPDES-regulated municipal and small construction storm water discharges will be in the form of BMPs, and that numeric limits will be used only in rare instances.

When a non-numeric water quality-based effluent limit is imposed, the permit's administrative record, including the fact sheet when one is required, needs to support that the BMPs are expected to be sufficient to implement the WLA in the TMDL. See 40 C.F.R. §§ 124.8, 124.9 & 124.18.

The NPDES permit must also specify the monitoring necessary to determine compliance with effluent limitations. See 40 C.F.R. § 122.44(i). Where effluent limits are specified as BMPs, the permit should also specify the monitoring necessary to assess if the expected load reductions attributed to BMP implementation are achieved (e.g., BMP performance data).

The permit should also provide a mechanism to make adjustments to the required BMPs as necessary to ensure their adequate performance.

This memorandum is organized as follows:

(I). Regulatory basis for including NPDES-regulated storm water discharges in WLAs in TMDLs;

(II). Options for addressing storm water in TMDLs; and

(III). Determining effluent limits in NPDES permits for storm water discharges consistent with the WLA

(I). Regulatory Basis for Including NPDES-regulated Storm Water Discharges in WLAs in TMDLs

As part of the 1987 amendments to the CWA, Congress added Section 402(p) to the Act to cover discharges composed entirely of storm water. Section 402(p)(2) of the Act requires permit coverage for discharges associated with industrial activity and discharges from large and medium municipal separate storm sewer systems (MS4), i.e., systems serving a population over 250,000 or systems serving a population between 100,000 and 250,000, respectively. These discharges are referred to as Phase I MS4 discharges.

In addition, the Administrator was directed to study and issue regulations that designate additional storm water discharges, other than those regulated under Phase I, to be regulated in order to protect water quality. EPA issued regulations on December 8, 1999 (64 FR 68722), expanding the NPDES storm water program to include discharges from smaller MS4s (including all systems within "urbanized areas" and other systems serving populations less than 100,000) and storm water discharges from construction sites that disturb one to five acres, with opportunities for area-specific exclusions. This program expansion is referred to as Phase II.

Section 402(p) also specifies the levels of control to be incorporated into NPDES storm water permits depending on the source (industrial versus municipal storm water). Permits for storm water discharges associated with industrial activity are to require compliance with all applicable provisions of Sections 301 and 402 of the CWA, i.e., all technology-based and water quality-based requirements. See 33 U.S.C. §1342(p)(3)(A). Permits for discharges from MS4s, however, "shall require controls to reduce the discharge of pollutants to the maximum extent practicable ... and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants." See 33 U.S.C. §1342(p)(3)(B)(iii).

Storm water discharges that are regulated under Phase I or Phase II of the NPDES storm water program are point sources that must be included in the WLA portion of a TMDL. See 40 C.F.R. § 130.2(h). Storm water discharges that are not currently subject to Phase I or Phase II of the NPDES storm water program are not required to obtain NPDES permits. 33 U.S.C. §1342(p)(1) & (p)(6). Therefore, for regulatory purposes, they are analogous to nonpoint sources and may be included in the LA portion of a TMDL. See 40 C.F.R. § 130.2(g).

(II). Options for Addressing Storm Water in TMDLs

Decisions about allocations of pollutant loads within a TMDL are driven by the quantity and quality of existing and readily available water quality data. The amount of storm water data available for a TMDL varies from location to location. Nevertheless, EPA expects TMDL authorities will make separate aggregate allocations to NPDES-regulated storm water discharges

(in the form of WLAs) and unregulated storm water (in the form of LAs). It may be reasonable to quantify the allocations through estimates or extrapolations, based either on knowledge of land use patterns and associated literature values for pollutant loadings or on actual, albeit limited, loading information. EPA recognizes that these allocations might be fairly rudimentary because of data limitations..

EPA also recognizes that the available data and information usually are not detailed enough to determine waste load allocations for NPDES-regulated storm water discharges on an outfall-specific basis. In this situation, EPA recommends expressing the wasteload allocation in the TMDL as either a single number for all NPDES-regulated storm water discharges, or when information allows, as different WLAs for different identifiable categories, e.g., municipal storm water as distinguished from storm water discharges from construction sites or municipal storm water discharges from City A as distinguished from City B. These categories should be defined as narrowly as available information allows (e.g., for municipalities, separate WLAs for each municipality and for industrial sources, separate WLAs for different types of industrial storm water sources or dischargers).

(III). Determining Effluent Limits in NPDES Permits for Storm Water Discharges Consistent with the WLA

Where a TMDL has been approved, NPDES permits must contain effluent limits and conditions consistent with the requirements and assumptions of the wasteload allocations in the TMDL. See 40 CFR § 122.44(d)(1)(vii)(B). Effluent limitations to control the discharge of pollutants generally are expressed in numerical form. However, in light of 33 U.S.C. §1342(p)(3)(B)(iii), EPA recommends that for NPDES-regulated municipal and small construction storm water discharges effluent limits should be expressed as best management practices (BMPs) or other similar requirements, rather than as numeric effluent limits. See *Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits*, 61 FR 43761 (Aug. 26, 1996). The Interim Permitting Approach Policy recognizes the need for an iterative approach to control pollutants in storm water discharges. Specifically, the policy anticipates that a suite of BMPs will be used in the initial rounds of permits and that these BMPs will be tailored in subsequent rounds.

EPA's policy recognizes that because storm water discharges are due to storm events that are highly variable in frequency and duration and are not easily characterized, only in rare cases will it be feasible or appropriate to establish numeric limits for municipal and small construction storm water discharges. The variability in the system and minimal data generally available make it difficult to determine with precision or certainty actual and projected loadings for individual dischargers or groups of dischargers. Therefore, EPA believes that in these situations, permit limits typically can be expressed as BMPs, and that numeric limits will be used only in rare instances.

Under certain circumstances, BMPs are an appropriate form of effluent limits to control pollutants in storm water. See 40 CFR § 122.44(k)(2) & (3). If it is determined that a BMP approach (including an iterative BMP approach) is appropriate to meet the storm water component of the TMDL, EPA recommends that the TMDL reflect this.

EPA expects that the NPDES permitting authority will review the information provided by the TMDL, see 40 C.F.R. § 122.44(d)(1)(vii)(B), and determine whether the effluent limit is appropriately expressed using a BMP approach (including an iterative BMP approach) or a numeric limit. Where BMPs are used, EPA recommends that the permit provide a mechanism to require use of expanded or better-tailored BMPs when monitoring demonstrates they are necessary to implement the WLA and protect water quality.

Where the NPDES permitting authority allows for a choice of BMPs, a discussion of the BMP selection and assumptions needs to be included in the permit's administrative record, including the fact sheet when one is required. 40 C.F.R.§§ 124.8, 124.9 & 124.18. For general permits, this may be included in the storm water pollution prevention plan required by the permit. See 40 C.F.R. § 122.28. Permitting authorities may require the permittee to provide supporting information, such as how the permittee designed its management plan to address the WLA(s). See 40 C.F.R. § 122.28. The NPDES permit must require the monitoring necessary to assure compliance with permit limitations, although the permitting authority has the discretion under EPA's regulations to decide the frequency of such monitoring. See 40 CFR § 122.44(i). EPA recommends that such permits require collecting data on the actual performance of the BMPs. These additional data may provide a basis for revised management measures. The monitoring data are likely to have other uses as well. For example, the monitoring data might indicate if it is necessary to adjust the BMPs. Any monitoring for storm water required as part of the permit should be consistent with the state's overall assessment and monitoring strategy.

The policy outlined in this memorandum affirms the appropriateness of an iterative, adaptive management BMP approach, whereby permits include effluent limits (e.g., a combination of structural and non-structural BMPs) that address storm water discharges, implement mechanisms to evaluate the performance of such controls, and make adjustments (i.e., more stringent controls or specific BMPs) as necessary to protect water quality. This approach is further supported by the recent report from the National Research Council (NRC), *Assessing the TMDL Approach to Water Quality Management* (National Academy Press, 2001). The NRC report recommends an approach that includes "adaptive implementation," i.e., "a cyclical process in which TMDL plans are periodically assessed for their achievement of water quality standards" . . . and adjustments made as necessary. *NRC Report* at ES-5.

This memorandum discusses existing requirements of the Clean Water Act (CWA) and codified in the TMDL and NPDES implementing regulations. Those CWA provisions and regulations contain legally binding requirements. This document describes these requirements; it does not substitute for those provisions or regulations. The recommendations in this memorandum are not binding; indeed, there may be other approaches that would be appropriate

in particular situations. When EPA makes a TMDL or permitting decision, it will make each decision on a case-by-case basis and will be guided by the applicable requirements of the CWA and implementing regulations, taking into account comments and information presented at that time by interested persons regarding the appropriateness of applying these recommendations to the particular situation. EPA may change this guidance in the future.

If you have any questions please feel free to contact us or Linda Boornazian, Director of the Water Permits Division or Charles Sutfin, Director of the Assessment and Watershed Protection Division.

cc:
Water Quality Branch Chiefs
Regions 1 - 10

Permit Branch Chiefs
Regions 1 - 10

EXHIBIT "2"

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

AUG 22 2003

OFFICE OF
WATER

The Honorable Bart Doyle
CPR Steering Committee
Mayor Pro Tem
City of Sierra Madre
2175 Cherry Avenue
Signal Hill, CA 90755

Dear Mayor Doyle:

Thank you for your letter of March 28, 2003, following up on our March 11, 2003 meeting. Your letter requests the Environmental Protection Agency's (EPA) assistance with several aspects of both the Los Angeles Region Basin Plan Review and the Los Angeles County MS4 NPDES permit.

I want to apologize for not responding sooner to your letter. You have raised many important issues for us to look at in more detail. You have asked EPA to support an accelerated review of the Los Angeles Basin Plan as well as participating and helping build consensus in completing the review. EPA staff are working closely with Regional Board staff to develop basin plan amendments and are actively working with stakeholder groups seeking solutions to ongoing water quality problems in the Los Angeles Region.

In addition, you have expressed concern about the need to complete numerous use attainability analyses (UAAs) in order to designate proper water quality standards for small, minor water bodies. You have asked for information on how various EPA Regions have interpreted the Tributary Rule and request guidance from EPA Headquarters to Region 9 and California on this issue. EPA supports the state's effort to identify and adopt appropriate designated uses for the water bodies of concern. However, EPA and state regulations require any change in designated uses to go through the state's water quality standards revision process, including the public participation process. In addition, any change to a designated use that results in a use that is not specified in Clean Water Act section 101(a), must be accompanied by a UAA. This does not automatically mean that detailed case-by-case analyses would be required for each water body. EPA believes that there are several approaches that may be appropriate for conducting analyses to modify designated uses, such as conducting a batch analysis for multiple waters with similar characteristics or conducting simplified analyses, depending on the water body's characteristics and the type and/or source of pollutants. EPA Region 9 is committed to working with the Los Angeles Regional Water Quality Board on any efforts it may undertake to revise water bodies' designated uses.

California and EPA Region 9 are not unique in how they interpret the Tributary Rule. Several other states have similar provisions contained in their water quality standards. Individual states and EPA have generally interpreted these provisions as a mechanism to apply water quality standards where an individual water body's standards, including designated uses, are not explicitly identified.

Your letter also raises issues related to the Los Angeles County MS4 permit. You have requested that EPA clarify to the Regional Board the intent of the receiving waters limitations. The Los Angeles Regional Water Quality Control Board developed a Frequently Asked Questions (FAQ) document to help clarify this and other questions that have been raised about this permit. It is available at www.swrcb.ca.gov/rwqcb4. EPA believes this document clarifies the intent of the receiving waters limitations language.

You also ask EPA to provide guidance on the definition of Maximum Extent Practicable (MEP) and to provide examples of its practical application. Congress established MEP but did not provide language defining this standard. EPA envisions MEP as an iterative process that considers such factors as conditions and beneficial uses of receiving waters, MS4 size, climate, implementation schedules, current ability to finance the program, hydrology, geology, and capacity to perform operation and maintenance. EPA understands the importance of providing assistance to help communities implement MEP. We are looking at the information gathered from evaluating many MS4 permits and programs. We hope to use this to provide examples of good storm water programs.

You have raised concerns about implementation of TMDLs through NPDES permits and have asked EPA to provide samples of alternative implementation methods. EPA believes that permits are a critical component of TMDL implementation. In this situation, the LA permit contains a compliance framework that provides flexibility and time for communities to develop cost-effective controls. EPA will continue to work with the Regional Board to make sure that they consider different implementation methods for TMDLs.

Your letter states that the Regional Board is not following EPA's November 2002 memo on establishing TMDL Waste Load Allocations and Stormwater NPDES Permit Requirements. You ask EPA to provide guidance to the Regional Board that supports this memo. EPA worked closely with all ten Regions on this memo and expects that it will be followed by the states. I've asked my staff to follow up with the State and would be happy to discuss this with you further if the Regional Board is not following the memo.

Finally, you request approval of your FY 2003 program funding from this year's appropriation and request additional funding for demonstration projects along the Lower Los Angeles and San Gabriel Rivers. EPA supports the types of demonstration projects that you are proposing, but as you know, we always have requests to fund far more worthy projects than we have funds for. I would be glad to talk with you further about your proposal for additional funding.

Thank you for sharing your concerns on these issues. Please contact me if you wish to discuss any of this further, or have your staff call James A. Hanlon, Director, Office of Wastewater Management, at (202) 564-0748.

Sincerely,

Benjamin H. Grumbles
Deputy Assistant Administrator

EXHIBIT "3"

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF WATER

November 17, 2008

Dear Colleague:

Today we are making available the draft technical document *TMDLs to Stormwater Permits Handbook* for your review and comment. Stormwater runoff is a significant contributor to water quality impairments across the country, particularly runoff from developing and urbanized areas. Currently there are thousands of Clean Water Act section 303(d) waters listed as impaired for stormwater-source pollutants such as pathogens, nutrients, sediments and metals. To effectively address these impairments it is important to strengthen connections between two key federal programs under the Clean Water Act – the TMDL program and the NPDES stormwater permitting program.

This Handbook provides a reference for TMDL practitioners and permit writers on current methods being used to develop more detailed stormwater-source TMDL allocations, TMDL implementation plans including best management practices, and methods for translating TMDL allocations into NPDES stormwater permit requirements. The Handbook assumes that the reader has a working knowledge of both TMDLs and NPDES stormwater permits, and provides background information on the components of these programs. Please note that last month the National Research Council released a lengthy report, *Urban Stormwater Management in the United States* (NRC, the National Academies Press, October 15, 2008). We intend to review the publication for consideration in producing the final version of the Handbook.

Please provide us feedback on the methods and approaches presented in this Draft Handbook, as well as additional TMDL-stormwater case studies, implementation plans, other valuable resources, or permits and/or permit language that would be useful to include. Comments on the document should be sent to Christine Ruf (ruf.christine@epa.gov), Dean Maraldo (maraldo.dean@epa.gov) and Jack Faulk (faulk.jack@epa.gov) by February 27, 2009.

Thanks again for your interest.

John Goodin /s/
Chief, Watershed Branch

Jack Faulk, /s/
Acting Chief, Industrial Permits Branch

Kevin Pierard /s/
Chief, Watersheds and Wetlands Branch, Region 5

Peter Swenson /s/
Chief, NPDES Programs Branch, Region 5

For more information on this technical document, please refer to the TMDL or NPDES contacts, below:

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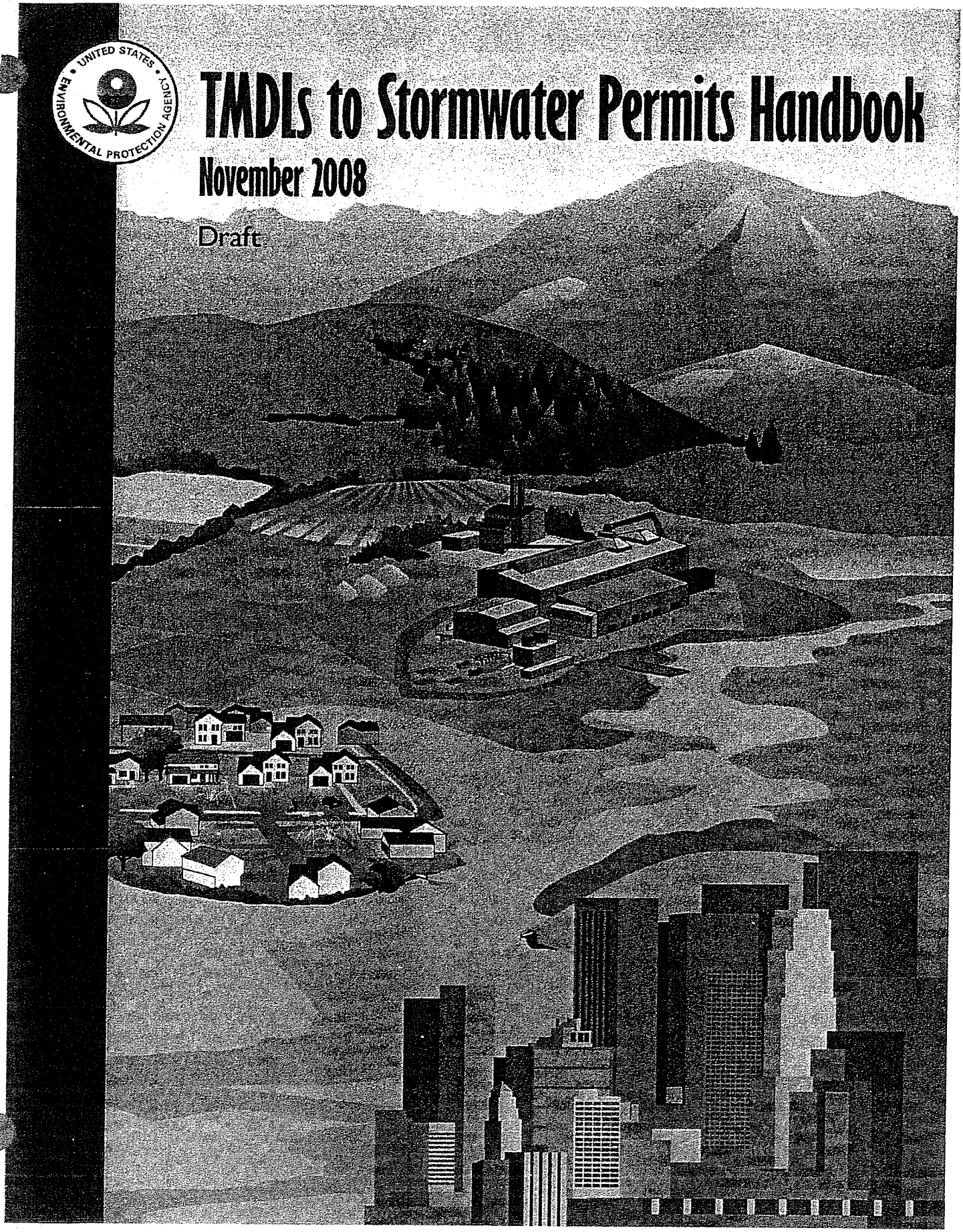
TMDLs to Stormwater Permits Handbook

November 2008

Draft



TMDLs To Stormwater Permits Handbook

DRAFT

November 2008

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DISCLAIMER

This document provides technical information to TMDL and NPDES practitioners who are familiar with the relevant technical approaches and legal requirements pertaining to developing TMDLs and NPDES stormwater permits, and refers to statutory and regulatory provisions that contain legally binding requirements. This document does not substitute for those provisions or regulations, nor is it a regulation itself. Thus, it does not impose legally binding requirements on EPA or States, who retain the discretion to adopt approaches on a case-by-case basis that differ from this information. Interested parties are free to raise questions about the appropriateness of the application of this information to a particular situation, and EPA will consider whether or not the technical approaches are appropriate in that situation.

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Figures

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Preface

Thousands of impaired waterbodies require total maximum daily loads (TMDLs) for pollutants, such as pathogens, nutrients, sediments, and metals – pollutants commonly associated with urban stormwater discharges. As a result, it is important for the TMDL program and the National Pollutant Discharge Elimination System (NPDES) Stormwater program to identify opportunities and approaches for promoting TMDL implementation through stormwater permits. The U.S. Environmental Protection Agency (EPA) developed this *TMDLs to Stormwater Permits Handbook* (Handbook) to address challenges that are unique to TMDL development and implementation involving permitted stormwater discharges from municipal separate storm sewer systems (MS4s), industrial facilities, and construction activities.

The Handbook is intended for federal and state TMDL writers and NPDES stormwater permit writers responsible for addressing waterbodies impaired by discharges from stormwater sources. The Handbook assumes that the reader has a working knowledge of both the TMDL and the NPDES stormwater programs and provides limited background information on the basic regulatory and programmatic aspects of these programs.

The Handbook contains information to give TMDL and stormwater permit writers a better understanding of (1) cross-program regulatory requirements and programmatic processes; (2) current efforts to establish better cross-program connections; and (3) opportunities to further improve how the TMDL and NPDES Stormwater programs interact to address stormwater-related water quality impairments. Real-world examples are the predominant mechanism to illustrate concepts and approaches for promoting improved implementation of TMDLs through stormwater permits. The information contained in this Handbook represents an initial step in identifying and comprehensively addressing these issues. The issues and challenges surrounding TMDL implementation through stormwater permits will continue to evolve as EPA and state TMDL practitioners and stormwater permit writers consider and test new approaches and strategies.

ACKNOWLEDGEMENTS

EPA would like to acknowledge the following individuals for their contribution to this Draft Handbook:

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Acronyms and Abbreviations

303(d)	Section 303(d) of the Clean Water Act
AnnAGNPS	Annualized Agricultural Non-Point Source model
ASCE	American Society of Civil Engineers
BAT	best available technology economically achievable
BMP	best management practice
BOD5	five-day biochemical oxygen demand
CADDIS	Causal Analysis/Diagnosis Decision Information System
CASQA	California Stormwater Quality Association
CBOD5	five-day carbonaceous biochemical oxygen demand
CFB	commercial fishing ban
CFR	*Code of Federal Regulations*
cfs	cubic feet per second
CGP	Construction General Permit
CWA	Clean Water Act
DA	drainage area
DMR	discharge monitoring report
DO	dissolved oxygen
DRSCW	DuPage River Salt Creek Workgroup
DURMM	Delaware Urban Runoff Management Model
EFDC	Environmental Fluid Dynamics Code
EMAP	Environmental Monitoring and Assessment Program
eNOI	Electronic Notice of Intent
EPA	U.S. Environmental Protection Agency
FCG	fish consumption guidelines
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
GI	green infrastructure
GIS	geographic information system
GWLF	Generalized Watershed Loading Functions
HSPF	Hydrologic Simulation Program in Fortran

IC	impervious cover
ICIS	Integrated Compliance Information System
IDDE	Illicit Discharge Detection & Elimination
IDEAL	Integrated Design and Evaluation Assessment of Loadings
LA	load allocation
LID	low impact development
LSPC	Loading Simulation Program in C++
MASTEP	Massachusetts Stormwater Technology Evaluation Project
MDAS	Mining Data Analysis System
MEP	maximum extent practicable
mg/L	milligram per liter
MOS	margin of safety
MRLC	multi-resolution land characteristics
MS4	municipal separate storm sewer system
MSGP	Multi-Sector General Permit
MUSIC	Model for Urban Stormwater Improvement Conceptualization
NAWQA	National Water-Quality Assessment (Program)
NLCD	National Land Cover Dataset
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NRC	National Research Council
NRCS	Natural Resources Conservation Service
NSPS	New Source Performance Standards
NTU	nephelometric turbidity units
NURP	Nationwide Urban Runoff Program
NWIS	National Water Information System
O&M	operation and maintenance
P8-UCM	Program for Predicting Polluting Particle Passage through Pits, Puddles, and Ponds—Urban Catchment Model
PCS	Permit Compliance System
PCB	polychlorinated biphenyl
PG BMP-DSS	Prince George's County Best Management Practice Decision Support System
QAPP	quality assurance project plan

SB	shellfishing ban
SET	Site Evaluation Tool
SI	stressor identification
SIC	standard industrial classification
SLAMM	Source Loading and Management Model
STORET	Storage and Retrieval (database)
SWAT	Soil and Water Assessment Tool
SWMM	Storm Water Management Model
SWMP	stormwater management program
SWPPP	stormwater pollution prevention plan
TARP	Technology Acceptance and Reciprocity Partnership
TMDL	total maximum daily load
TSS	total suspended solids
TWR	trophic weighted residue value of mercury in fish tissue
UNRBA	Upper Neuse River Basin Association
UOD	ultimate oxygen demand
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey
VAFSWM	Virginia Field Scale Wetland Model
VFSMOD	Vegetative Filter Strip Model
WLA	wasteload allocation
WQBEL	water quality-based effluent limitations
WQ_v	water quality volume

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INTRODUCTION

Across the country, stormwater runoff is a significant contributor to water quality impairments, particularly in developing and urbanized areas. There are thousands of impaired waterbodies requiring total maximum daily loads (TMDLs) for pollutants associated with stormwater sources, such as pathogens, nutrients, sediments, and metals. Developing TMDLs that include stormwater sources can present unique challenges because of the variety and number of sources, the variability of the pollutants discharged by these sources, the limited availability of monitoring data, and the complexity of the mechanisms by which pollutants in stormwater discharges affect ambient water quality criteria. Implementing TMDLs via National Pollutant Discharge Elimination System (NPDES) stormwater permits can also present challenges because of difficulties in translating the numeric, water quality-based TMDL wasteload allocations (WLAs) into permit requirements.

The purpose of this Handbook is to provide information to TMDL practitioners and NPDES stormwater permit writers (referred to as *TMDL writers and permit writers* throughout this Handbook) on the following:

- Current methods and other potential options for developing more precise WLAs for stormwater sources (referred to simply as *sources* throughout this Handbook)
- TMDL implementation plans including best management practice (BMP) and other stormwater management strategy recommendations
- Approaches for translating TMDL WLAs and implementation recommendations into NPDES stormwater permit requirements and implementation strategies

Information contained in this Handbook specifically addresses the following:

- TMDL WLAs for stormwater sources that clearly express and assign the targeted loading reductions necessary to attain and maintain water quality standards
- TMDL implementation plans that connect WLAs and stormwater permits by either (1) including specific recommendations (e.g., performance standards, management measures) for implementing WLAs, or (2) providing technical information for permit writers and permittees on how to analyze, select, and implement provisions to implement the WLAs
- Stormwater permits that are consistent with the WLAs by identifying specific elements, including management measures, that implement the WLA and, if available, TMDL implementation plan recommendations or specifying approaches for demonstrating that specific provisions will implement WLAs

In addition, the goal is to provide TMDL and permit writers a better cross-program understanding of regulatory requirements and programmatic processes and a better understanding of opportunities to further improve how the TMDL and NPDES Stormwater programs should interact to address stormwater-related water quality impairments. The real-world examples provided in this Handbook are intended to provide a range of options for TMDL and permit writers to consider. Where real-world examples do not exist to illustrate a concept, the Handbook provides a hypothetical example for TMDL and permit writers to consider, and the writers hope that it provides insight into future directions to improve this linkage.

This Handbook is organized as follows:

- **Chapter One: Understanding the connections between TMDLs and stormwater permits.** Provides overviews of TMDL and NPDES Stormwater programs and summarizes the challenges of developing TMDLs and implementing WLAs through stormwater permits.
- **Chapter Two: Identifying opportunities to coordinate TMDLs and stormwater permits.** Identifies ideas and opportunities for TMDL and permit writers to coordinate at various points throughout the TMDL and stormwater permitting processes.
- **Chapter Three: Characterizing impairments and stormwater sources.** Provides a detailed discussion of the type of information that TMDL and permit writers can use to generate a detailed stormwater source characterization, including data on water quality and watershed conditions, as well as data generated by stormwater permittees and where to obtain this information.
- **Chapter Four: Developing TMDLs with Stormwater Sources.** Addresses key stormwater-specific issues that TMDL writers can consider when developing TMDLs using a specific technical approach. It also discusses options for categorizing stormwater WLAs to facilitate their implementation in permits.
- **Chapter Five: Promoting effective stormwater management.** Presents an adaptive management framework for selecting, implementing, assessing, and modifying stormwater management strategies using information and tools that predict potential BMP performance
- **Chapter Six: Coordinating TMDLs and stormwater permit requirements.** Provides a variety of options for effectively tying together TMDLs and associated permit requirements through the development of TMDL reports, stormwater permit language, and fact sheets, as well as TMDL implementation planning documents.
- **Appendix.** Provides excerpts of TMDLs, implementation plans, and stormwater permit requirements to illustrate how states connect permitted stormwater source requirements among programmatic documents.
- **Bibliography.** Provides a comprehensive list of documents, Web sites, and databases that are included in the Resources section of each chapter or cited in the Handbook.
- **Glossary.** Defines key terms introduced throughout the Handbook.

Chapter One
Understanding the Connections Between TMDLs and Stormwater Permits

What's included in this chapter

- ✓ Overview of the TMDL and stormwater programs.
- ✓ Discussion of the challenges associated with connecting TMDLs and stormwater permit requirements.

What you should know after reading this chapter

- ✓ Basic components of a TMDL and why stormwater sources receive WLAs.
- ✓ The three categories of permitted stormwater sources, the two types of stormwater permits, and a general understanding of stormwater permit requirements.
- ✓ Why development of this Handbook was necessary to help connect TMDLs and stormwater permits.

Potential roles and responsibilities under this activity

If you are a TMDL writer

1. Develop a basic understanding of who the stormwater program covers, the types of permits and requirements to which stormwater sources are subject, and factors affecting the role of the stormwater permit writer.
2. Understand how TMDL development relates for permit writers.

If you are a stormwater permit writer

1. Develop a basic understanding of when TMDLs are necessary, the TMDL development process, and factors affecting the role of TMDL writers.
2. Understand how stormwater permitting relates to developing and implementing TMDLs.

1. UNDERSTANDING THE CONNECTIONS BETWEEN TMDLS AND STORMWATER PERMITS

Understanding the regulatory, programmatic, and technical issues associated with the TMDL and NPDES Stormwater programs can help TMDL and permit writers improve cross-program connections, leading to better TMDLs and stormwater permits. This chapter briefly summarizes the key statutory and regulatory elements of these two programs.

1.1. What Every Permit Writer Should Know about the TMDL Program

> ***Resources:*** For more information on the TMDL program, refer to the Resources list at the end of this chapter in Section 1.4.1, including EPA's TMDL Web site at www.epa.gov/owow/tmdl/.

A TMDL reflects the total pollutant loading a waterbody can receive and still meet water quality standards. TMDLs are one of the many tools Congress authorized in the Clean Water Act (CWA) to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." (CWA section 101(a)). Section 303(d) of the CWA requires states, territories, and authorized tribes to identify and establish a priority ranking for waters for which technology-based effluent limitations required by section 301 are not stringent enough to implement applicable water quality standards, establish TMDLs for the pollutants causing impairment in those waters, and submit to the U.S. Environmental Protection Agency (EPA), from time to time, the list of waters in which water quality standards are not attained or maintained and for which TMDLs are required, as well as their associated TMDLs. EPA must review and approve or disapprove lists and TMDLs within 30 days. If EPA disapproves a list or a TMDL submitted by states, territories, and authorized tribes, EPA must establish the list or TMDL. In addition, some courts have interpreted the statute as requiring EPA to establish lists and TMDLs when a state fails to do so. EPA's TMDL regulations can be found at Title 40 of the *Code of Federal Regulations* (CFR) sections 130.7 and 130.2.

Listing impaired waters and establishing TMDLs for waters impaired by pollutants from point and nonpoint sources does not, by itself, create any new or additional implementation authorities to control point or nonpoint sources. Permitting authorities implement WLAs included in a TMDL through enforceable water quality-based discharge limits in NPDES permits authorized under section 402 of the CWA (see next section, "What every TMDL Writer Should Know about the NPDES Stormwater Program"). Mechanisms for implementing nonpoint source load allocations (LAs) within TMDLs include state section 319 nonpoint source management programs, coupled with a wide variety of other state, local, tribal, and federal programs—which may be regulatory, nonregulatory, or incentive-based, depending on the program—as well as voluntary action by committed citizens. To date, no tribe has sought or received CWA authority to establish TMDLs.

A brief summary of the key aspects of the TMDL program is provided below.

- **Section 303(d) Lists of Impaired Waterbodies.** Each state is required to identify "water quality limited segments," or impaired waterbodies, for which federal technology-based controls, state, tribal, or local effluent limitations or other pollution control requirements (e.g., BMPs) required by local, state, tribal, or federal authority are not stringent enough to achieve water quality standards, including waters not meeting standards due to thermal discharges (40 CFR 130.7 (b)). The list that

identifies these water quality limited segments is known as the Section 303(d) list. States are required to submit Section 303(d) list updates every 2 years. The information that the Section 303(d) list must contain (40 CFR 130.7) is as follows:

- ✓ The pollutant(s) causing (or expected to cause) the violation of water quality standards for each listed water
- ✓ A priority ranking of all listed waters and waters targeted for TMDL development within the next 2-year listing cycle
- ✓ Documentation to support listing decisions, including a description of the methodology used, data evaluated, rationale for not using any readily available data, and any other reasonable information requested by EPA to evaluate the listing decisions

New Location for 303(d) Lists

States are now integrating Section 303(d) lists of impaired waters and Section 305(b) water quality assessment reports to produce Integrated Reports. The Integrated Report groups a state's waters into five categories, depending on a determination of whether a waterbody is impaired or is in attainment of water quality standards. Category 5 of the Integrated Report contains the list of waterbodies that do not meet water quality standards and require a TMDL. Therefore, Category 5 represents the Section 303(d) list of impaired waters. For more information on Integrated Reports, visit EPA's Web site: www.epa.gov/owow/tmdl/2008_ir_memorandum.html

- **Components of a TMDL.** EPA's regulations at 40 CFR 130.2(i) define a TMDL as the sum of WLAs plus load LAs plus a margin of safety (MOS) to account for uncertainty between pollutant sources and resulting water quality. Allocations to pollutant sources vary on the basis of the type of pollutant sources—WLAs are loads allotted to existing and future point sources, and LAs are loads attributed to existing and future nonpoint sources, plus loads from natural background. Future growth allowances in TMDLs account for increased pollutant loadings and can be included as an allocation of pollutant loads from new sources expected in the future. For instance, in areas where land use changes are anticipated, TMDLs can include a reserve for future growth, which can be a separate component of the TMDL or included in WLAs or LAs.

Characteristics of a TMDL

- Addresses a variety of pollutants
- Contains quantified targets
- Considers all significant sources
- Expresses pollutant loads in relationship to water quality standards
- Provides allocations for known sources
- Considers a MOS and future growth
- Focuses on temporal nature of allocations to achieve standards
- Requires sound data
- Involves stakeholders

- **TMDL implementation plans.** Although not required by federal law or regulation, many states include (and some state regulations do require) TMDL implementation plans, which are typically developed in coordination with relevant stakeholders. A TMDL implementation plan typically identifies recommended management practices that major sources in the watershed are expected to implement, along with a general time frame and strategy for funding and monitoring. Factors such as waterbody ranking, data availability, court-ordered schedules, and anticipated management activities can affect the timing of TMDL development and implementation.

As illustrated in Figure 1, the process for developing a TMDL typically includes the following steps:

- Stakeholder involvement and public participation to engage affected parties and solicit input, feedback and buy-in for a successful TMDL. This process can occur throughout the TMDL development (and implementation) process.
- Watershed characterization to identify the waterbody, watershed, and impairment conditions; TMDL targets; and potential sources.

- Linkage analysis to calculate the loading capacity.
- Allocation analysis to evaluate and assign WLAs to point sources and LAs to nonpoint sources.
- Developing the TMDL report and administrative record for submittal to EPA.
- TMDL implementation to identify management activites to implement WLAs and LAs.

Figure 1 also illustrates where to find a discussion of each activity in the Handbook. At the beginning of each chapter, you will find a modified version of Figure 1 that highlights the TMDL activities discussed in that chapter.

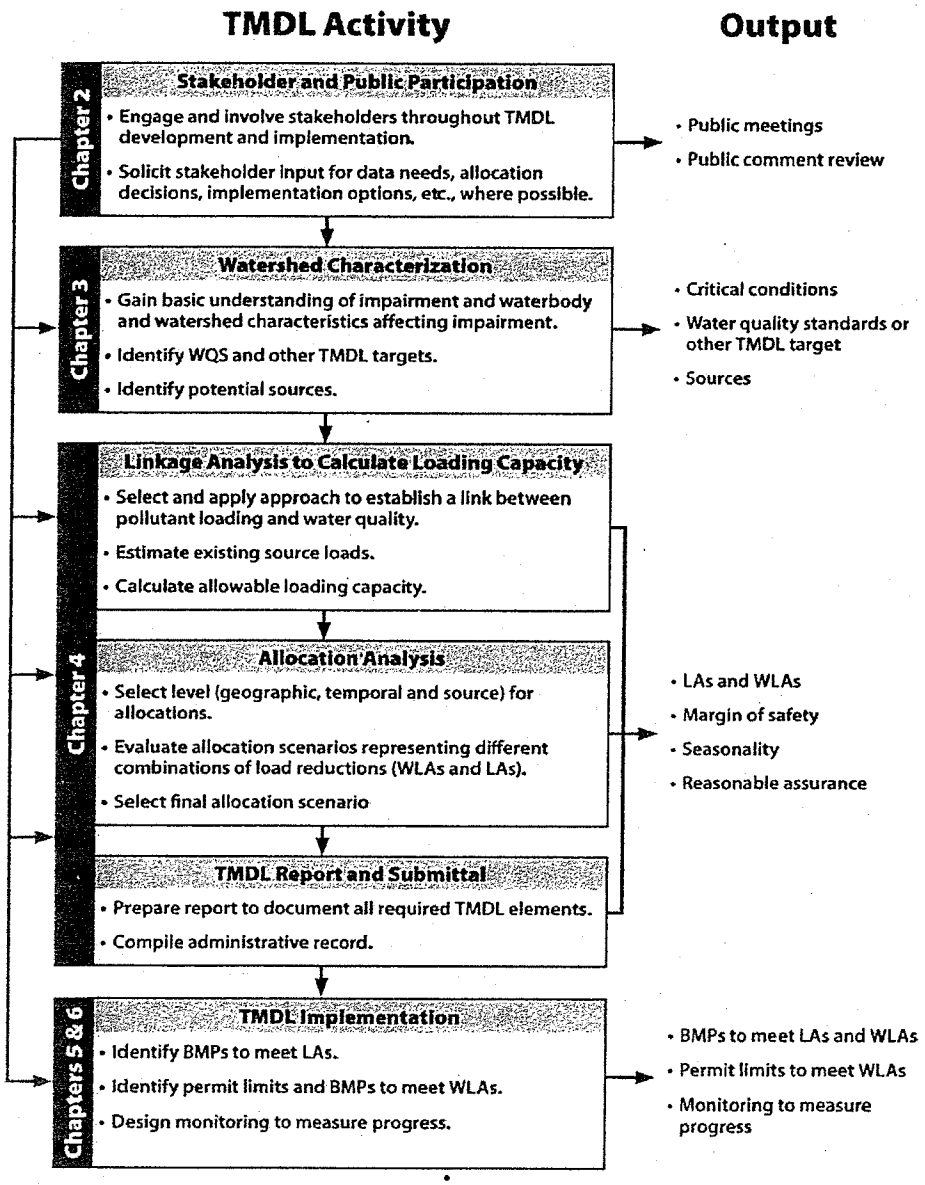

Figure 1. Typical steps in the TMDL development process.

1.2. What Every TMDL Writer Should Know about the NPDES Stormwater Program

To understand the NPDES Stormwater program, it is important to have an understanding of the NPDES program framework. This section provides a brief overview of the NPDES program to introduce basic permitting concepts and then provides details about the NPDES Stormwater program.

1.2.1. NPDES Program Framework

The CWA enacted in 1972 established the NPDES program and provides that either EPA or the state can administer (i.e., issue permits, assess compliance, take enforcement) the program. EPA, however, must first authorize a state to do so. Authorization requires that a state demonstrate to EPA's satisfaction that it has the necessary legal authority, technical skills, and resources to administer the program. Once authorized, a state becomes the *permitting authority*, taking on the responsibility of administering the NPDES program, including issuance of NPDES stormwater permits. As of 2008, 45 states (excluding Alaska, Idaho, Massachusetts, New Hampshire, and New Mexico) and one territory (U.S. Virgin Islands) are authorized to administer the NPDES program.[1] Where a state is not authorized to administer the NPDES program, the EPA Regional office is the permitting authority. For the purpose of this Handbook, the term *permit writer* is intended to convey a state or EPA staff person responsible for acting on behalf of the state agency or EPA regional office serving as the NPDES permitting authority in that area.

The NPDES regulations provide for two basic types of permits: individual and general. Dischargers requesting to be covered under an individual permit are required to submit an individual permit application, which the permit writer uses as the basis for developing site-specific permit requirements. The individual permit is then issued to that discharger for a period not to exceed 5 years, with a requirement to reapply before the expiration date. An individual permit is tailored specifically for an individual facility.

Five Basic Components of General and Individual NPDES Permits

- Cover page
- Effluent limits (numeric or narrative; technology-based or water quality-based)
- Monitoring and reporting requirements
- Standard conditions
- Special conditions

When the permitting authority expects that many dischargers with similar types of activities will require coverage under an NPDES permit, the permitting authority may choose to issue a general permit in lieu of issuing individual permits to each of these dischargers. After a general permit is issued, dischargers wishing to be covered under the general permit submit a Notice of Intent (NOI) to the permitting authority. These dischargers, consistent with procedures specified in the general permit, are then authorized to discharge under the terms of that general permit. The CWA requires that NPDES permits, both individual and general, be made available to the public for at least 30 days for review and comment before final issuance.

NPDES permits, with the exception of municipal separate storm sewer system (MS4) permits, must include technology-based effluent limitations based on best available technology economically achievable (BAT), or New Source Performance Standards (NSPS) for new sources, and any other more

[1] EPA Regions retain permitting authority for most Indian lands, federal facilities in four states (Colorado, Deleware, Vermont, and Washington) certain oil and gas activities (Texas and Oklahoma) and agricultural activities (Oklahoma).

stringent limitations as necessary to ensure that the discharge does not cause or contribute to in-stream exceedances of water quality standards. MS4s defined by the regulations as needing NPDES permit coverage are required to implement stormwater management programs (SWMPs) designed to control pollutants to the maximum extent practicable (MEP) to protect water quality rather than meeting a BAT requirement as for other NPDES permittees. NPDES-authorized states and territories may impose more stringent permit requirements than those set forth in federal regulations.

1.2.2. NPDES Stormwater Program

> ***Resources:*** For more information on the NPDES Stormwater program, refer to the Resources list at the end of this chapter in Section 1.4.3, including EPA's NDPES Web site at www.epa.gov/npdes/stormwater.

In 1987 Congress amended the CWA to require EPA to regulate certain stormwater discharges through the NPDES program. After promulgating stormwater rules in 1990 and 1999 (known as the Phase I and Phase II stormwater rules, respectively), NPDES permitting authorities now issue permits to control stormwater discharges from (1) MS4s, (2) industrial activities, and (3) construction activities as follows:

(1) Medium, large, and regulated small MS4s: MS4s, generally, are public storm sewer systems (including roads with drainage systems and municipal streets) that are owned or operated by a public body and not part of a combined sewer (i.e., storm and sanitary sewers combined). Incorporated places and counties meeting EPA's definitions of medium and large MS4s are identified in the NPDES regulations in 40 CFR Part 122, Appendices F through I. In general, these are separate storm sewer systems that serve populations over 100,000 people. Regulated small MS4s are identified according to the U.S. Census Bureau definition of urbanized area as established every 10 years in its decennial census. Populations served by these regulated small MS4s range from several hundred to tens of thousands of people, but in most instances these systems serve fewer than about 30,000–50,000 people.

> ***Types of MS4 Infrastructure and Permittees***
>
> The NPDES Stormwater program uses the term MS4 to describe the type of stormwater conveyance infrastructure, as well as the permittee required to obtain stormwater permit coverage. As a type of infrastructure, MS4s are not merely a system of pipes. As defined by regulations, an MS4 can also include drainage systems for roadways, gutters, and ditches.
>
> An MS4 permittee does not just include municipally owned storm sewer systems. The term MS4 can also apply to a variety of entities that own and operate MS4 infrastructure, such as departments of transportation, military bases, universities, hospitals, and prisons.

(2) Industrial facilities that fall under 11 categories of industrial activities that discharge to an MS4 or to waters of the United States (construction activity disturbing 5 acres or more is one of these 11 categories, but because of the nature of its operations, it is addressed separately from the other 10 categories.). Industrial facilities (except construction) may certify to a condition of *no exposure* in lieu of obtaining NPDES permit coverage if their industrial materials and operations are not exposed to stormwater.

> ***11 Categories of Industrial Activity***
>
> Category One (i): Facilities subject to national effluent limitations
>
> Category Two (ii): Heavy Manufacturing
>
> Category Three (iii): Mining and Oil and Gas
>
> Category Four (iv): Hazardous Waste Storage, Treatment, or Disposal Facilities
>
> Category Five (v): Landfills
>
> Category Six (vi): Recycling Facilities
>
> Category Seven (vii): Steam Electric Plants
>
> Category Eight (viii): Transportation Facilities
>
> Category Nine (ix): Wastewater Treatment Works
>
> Category Ten (x): Construction Activity disturbing 5 acres or more
>
> Category Eleven (xi): Light Industrial Activity

(3) Construction activity that disturbs one or more acre of land and less than one acre if the activity is part of a larger common plan of development or sale (USEPA 2004). The Phase I stormwater rule regulates construction activities 5 acres and above. The Phase II stormwater rule added sites between one and 5 acres.

Figure 2 illustrates how the regulation of these stormwater sources affected the universe of regulated NPDES dischargers over time. From the beginning of the NPDES program, permit writers across the country developed and issued permits for approximately 60,000 facilities with wastewater discharges. The NPDES Phase I Stormwater program required stormwater discharges from large and medium MS4s, large construction activities, and industrial facilities to obtain NPDES permit coverage; bringing approximately 300,000 stormwater sources into the NPDES program. The NPDES Phase II Final Rule covering regulated small MS4s and construction sites between one and 5 acres added approximately 200,000 additional stormwater sources to the NPDES program universe.

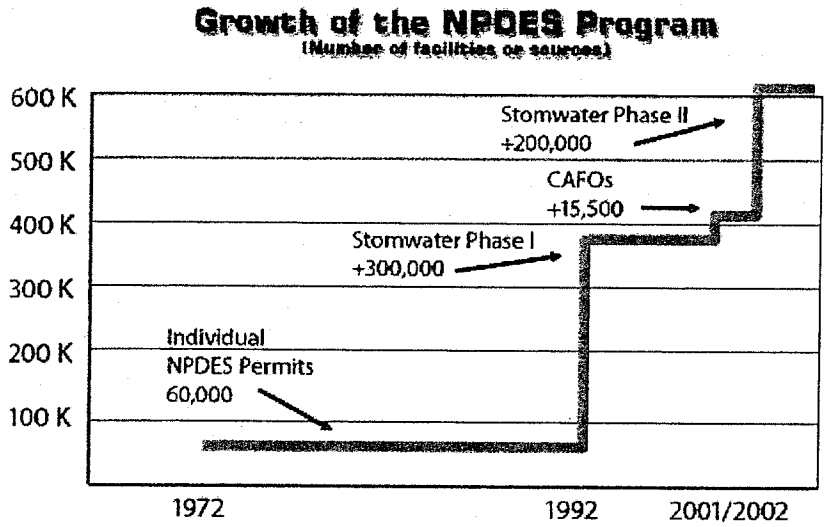

Figure 2. Number of facilities or sources permitted under various programs of the NPDES program over time.

A brief summary of key aspects of the NPDES Stormwater program is provided below.

1.2.2.1. Types of NPDES Stormwater Permits

To regulate the approximately 500,000 stormwater sources, the NPDES Stormwater program uses both individual and general permits.

- **Individual permits**, issued to most medium and large MS4s and small MS4s in a few states, require the initial submission of a comprehensive permit application. However, because most MS4s have already been permitted, the content of future applications is expected to contain less information than the original submission. Applications will contain available data or a summary of that data and the permittee's plans for future activities and controls to address any identified concerns. NPDES permitting authorities use the detailed permit application information to develop site-specific requirements.

- **General permits,** issued for most stormwater discharges associated with industrial and construction activities and small MS4s in most states, contain more widely applicable requirements. Stormwater dischargers submit an NOI to the permitting authority to obtain coverage under a general permit. The information necessary to complete an NOI for coverage under a general permit is usually (depending on state requirements) less burdensome than the information required for an individual permit. Coverage under a general permit is often relatively automatic when the discharger meets the eligibility requirements for coverage. Stormwater permittees that are unable to meet eligibility conditions for general permits must obtain coverage under an individual permit. Table 1 highlights the estimated number of stormwater permittees across the country by type of stormwater discharge and the number of general and individual permits issued to these permittees.

Table 1. Estimated number of stormwater permittees and permits by type of stormwater discharge

Type of stormwater discharge	Permittees	General permits	Individual permits
MS4	7,000	50	500
Industrial	100,000	120	Unknown*
Construction	250,000	60	Unknown*

* These permits are not tracked separately under the stormwater program. EPA estimates that several hundred entities are permitted with individual permits each year.

1.2.2.2. Standards and Limits in Stormwater Permits

The CWA requires, with the exception of MS4s, that NPDES permits contain technology-based effluent limits and water quality-based effluent limits (WQBELs) when the technology-based limits alone do not adequately protect water quality. The CWA standard for MS4s is that the permit must require controls to reduce the discharge of pollutants to the MEP to protect water quality. Stormwater permits use a variety of approaches to incorporate these concepts into NPDES permit conditions. Generally, stormwater permits require implementation of BMPs, identified as narrative effluent limits, deemed by the permitting authority to be appropriate to meet the intent of the CWA. These narrative effluent limits include practices such as source control and pollution prevention BMPs. Stormwater permits typically stipulate general categories of controls, and charge the permittee to articulate the details in a stormwater plan. Occasionally, stormwater permits will establish numeric effluent limits that must be met at the discharge point.

MEP Pollutant Reduction Standard for MS4s

Operators of regulated MS4s must develop and implement SWMPs that reduce the discharge of pollutants to the MEP to protect water quality. While MEP is a pollutant reduction standard that applies to all permitted MS4s, the practical aspects of MEP varies from location to location depending on factors such as pollutant sources and local receiving water conditions and concerns. EPA's *Measureable Goals Guidance for Phase II MS4s* (http://cfpub.epa.gov/npdes/stormwater/measurablegoals/part1.cfm) states the following:

> The definition of "MEP" should adapt continually to both current conditions and BMP effectiveness, but ultimately, successive iterations of the mix of BMPs and measurable goals should be made to achieve the objective of meeting water quality standards. If, after implementing the minimum control measures, there is still water quality impairment associated with discharges from the MS4, you will need to expand or better tailor your BMPs (USEPA 2001).

Stormwater permitting authorities must review MS4 SWMPs to determine if implementation of the plan is likely to reduce the discharge of pollutants to the MEP. Where the permitting authority identifies deficiencies, the MS4 must modify its SWMP.

1.2.2.3. Basic Stormwater Management Program and Pollution Prevention Plan Requirements

The primary requirement of NPDES stormwater permits is the development and implementation of a plan that describes how the permittee will control the discharge of pollutants in stormwater to meet permit requirements. Operators of regulated MS4s develop and implement SWMPs that cover a variety of activities discharging to the MS4, while operators of industrial facilities and construction activities must develop and implement facility-specific stormwater pollution prevention plans (SWPPPs). A brief overview of the type of management activities required in MS4 (Phase I and Phase II), industrial, and construction permits is provided below.

- **Phase I MS4 Permits.** Phase I MS4s, all of which were identified by incorporated place or county names in the 1990 Phase I Rule, were required to apply for permit coverage in the early 1990s with the application including the MS4s proposed SWMP to address programmatic, structural, and source control measures for stormwater discharges from commercial and residential areas, including discharges from areas of new development or redevelopment; illicit discharges; priority industrial facilities; and construction sites. Individual permits issued to Phase I MS4s specified the required SWMP activities and included other provisions to ensure effective implementation, such as monitoring and annual reporting.
- **Phase II MS4 Permits.** Regulated, small MS4s are required to obtain individual or general permit coverage and implement an SWMP that addresses the six minimum control measures: (1) public education and outreach; (2) public participation and involvement; (3) illicit discharge detection and elimination (IDDE); (4) construction site stormwater runoff control; (5) post-construction stormwater management in new and redevelopment; (6) pollution prevention/good housekeeping for municipal operations. In addition, Phase II MS4s must also develop and specify measurable goals for each of the six minimum control measures in the SWMP. The Phase II Final Rule does not require monitoring data as part of the application or as a requirement of the permit, although permitting authorities may decide otherwise. Regulated small MS4s are required to submit periodic reports to the permitting authority ranging from annually to twice every 5-year permit cycle.
- **Construction Stormwater Permits.** NPDES permits for stormwater discharges associated with construction activities require control measures (i.e., BMPs) to address pollutants in stormwater discharges. These requirements, almost always addressed through the issuance of statewide general permits, include erosion and sediment control BMPs to prevent the discharge of sediment and measures to prevent the discharge of non-sediment materials such as construction debris, vehicle fluids, concrete washout, and trash. In addition, some permitting authorities require post-construction stormwater management measures to minimize pollutant discharges after construction is complete. SWPPPs prepared by site operators describe activities to be performed and how the operator intends to comply with permit requirements (e.g., a description of controls to minimize

> ***Tip: Read SWMPs and SWPPPs—not just stormwater permits—to get implementation details.***
>
> TMDL writers often go to NPDES stormwater permits looking for information on stormwater discharges that will assist in the TMDL development process. Reviewing stormwater permits will provide an understanding of what permittees must include in the required SWMPs and SWPPPs, but the permits rarely provide complete details on this information. TMDL writers might need to obtain and review SWMPs and SWPPPs to gather information to support TMDL activitites, such as pollutant source characterization and pollutant load allocation. Chapter 3 of this Handbook provides an in-depth discussion of what information is available through SWMPs and SWPPPs and how TMDL writers can use this information to characterize stormwater sources.

exposure of the materials to stormwater and spill prevention and response practices). NPDES construction permits also typically require the site operator to document in an SWPPP any interim and permanent stabilization practices for the site, including a schedule of when the practices will be implemented.

- **Industrial Stormwater Permits.** Industrial stormwater permits typically focus on the implementation of BMPs to reduce stormwater pollutants. NPDES stormwater permits for industrial facilities typically require SWPPPs to document the facility's pollution prevention team, describe the site, identify the receiving waters, and describe the BMPs that will be implemented to meet permit requirements. An SWPPP should also contain a summary of potential pollutant sources, including spills and leaks, and a summary of existing stormwater discharge sampling data. The focus of the SWPPP is the description of the existing and planned BMPs to reduce stormwater pollutants. BMPs may be procedural such as good housekeeping activities, spill prevention and response planning, preventative maintenance, routine facility inspections, and employee training or structural systems, such as containment systems or sediment basins.

1.3. Key Challenges Associated with Connecting the TMDL and NPDES Stormwater Programs

> ***Resources:*** For more information on research and policy related to TMDLs and stormwater, refer to the Resources list at the end of this chapter in Section 1.4.2.

Improving the ways in which water quality programs work together and relate to one another often presents challenges because of programmatic, regulatory, and technical differences. Improving connections between the TMDL and NPDES Stormwater programs highlights challenges such as conflicting program priorities, and unsynchronized development schedules, lack of sufficient data, inadequate cross-program communication, and lack of adequate staff and resources. EPA and state TMDL and permit writers working to improve connections between the TMDL and NPDES Stormwater programs have identified some key challenges facing each program. EPA's *Total Maximum Daily Loads and National Pollutant Discharge Elimination System Storm Water Permits for Impaired Water Bodies: A Summary of State Practices* (USEPA 2007) provides a detailed discussion of these key challenges and possible solutions. These key challenges are briefly summarized below and discussed in greater detail in subsequent chapters.

1.3.1. Challenge 1: Addressing Differences in Organizational Structure

Strengthening the connections between TMDLs and stormwater permits begins with communication and coordination among internal programmatic staff. Often this is challenging for a variety of reasons. In most instances, TMDL and NPDES permitting staff function not only in different programs, but in different organizational groups. In some states, the separation between programs is more drastic, with TMDL and NPDES staff functioning under different agencies. These organizational differences can create real and perceived obstacles for effective staff coordination. In addition, agency staff can face programmatic pressures (e.g., court ordered deadlines, permit reissuance schedules) that limit timely coordination.

1.3.2. Challenge 2: Developing Consistent Stormwater Allocations in TMDLs

Approaches for developing and expressing TMDLs that include stormwater sources can vary within and among states. For example, some TMDLs assign aggregated stormwater WLAs to all permitted stormwater sources within a watershed or to each type of permitted stormwater source. Collecting additional dataor information on the permitted stormwater sources within a watershed might allow TMDL writers to generate more detailed WLAs that could facilitate the development of permit requirements.

1.3.3. Challenge 3: Translating Numeric TMDL WLAs into Implementation Strategies and Permit Requirements

One way for TMDL and permit writers to facililitate the implementation of TMDLs is to provide permittees with information on specific types of management strategies that could be used to implement the WLAs. In most cases, this means facilitating efforts so that the WLA, the TMDL implementation plan (if applicable), and the stormwater permit requirements are developed to coordinate with each other in a meaningful way, particularly when stormwater sources are covered exclusively by general permits.

1.3.4. Challenge 4: Reconciling Spatial Boundaries of TMDLs with Boundaries of NPDES Stormwater Permits

The TMDL program often provides information on impaired waters by waterbody or watershed. The majority of actions under the NPDES Stormwater program focus on site-specific activities (e.g., construction sites and industrial facilities) and large stormwater conveyances systems (e.g., MS4s). The different spatial scales at which regulatory agencies provide information to, and require information from, permittees can create challenges as permittees attempt to identify applicable requirements and determine the appropriate locations to implement the requirements.

1.3.5. Challenge 5: Incorporating Monitoring, Tracking, and Adaptive Management Elements into TMDL WLAs and Stormwater Permits

Monitoring and evaluation are key components to determining if stormwater management efforts are producing the necessary pollutant load reductions identified in the TMDLs, thereby making progress toward attainment of water quality standards. Because it is not required, most TMDLs do not address monitoring or, if the need is mentioned, the type and frequency of monitoring necessary to demonstrate progress towards attaining and maintaining water quality standards. Stormwater permits require all stormwater permittees to evaluate the efficacy of their SWMP or SWPPP. However, the evaluation process does not usually involve end-of-pipe or in-stream analytical monitoring to directly evaluate stormwater discharge or ambient water quality. To more effectively connect TMDLs and stormwater permits, the TMDL could include recommendations regarding monitoring, tracking, and adaptive management activities, and the relevant stormwater permits could either reference the recommended activities or adopt these recommendations. Permit writers can consider permittees to identify milestones on the basis of criteria (water quality- or technology-based) that use the monitoring and tracking information to drive adaptive management efforts..

1.4. Resources

1.4.1. TMDL Program

1. EPA's TMDL Web site: www.epa.gov/owow/tmdl/

2. USEPA (U.S. Environmental Protection Agency). 2005. *Guidance for 2006 Assessment, Listing, and Reporting Requirements Pursuant to Sections 303(d), 305(b), and 314 of the Clean Water Act [2006 Integrated Report Guidance (IRG)].* U.S. Environmental Protection Agency, Office of Water, Office of Wetland, Oceans and Watersheds, Washington, DC. www.epa.gov/owow/tmdl/2006IRG/#documents

   This document provides a recommended reporting format and suggested content to be used in developing a single document that integrates the reporting requirements of the CWA sections 303(d), 305(b), and Part 314. The report also provides a comprehensive compilation of EPA's previous guidance related to integrated reporting.

3. USEPA (U.S. Environmental Protection Agency). 2006. *Information Concerning 2008 Clean Water Act Sections 303(d), 305(b), and 314 Integrated Listing and Reporting Decisions.* Memorandum from Diane Regas, Director, Office of Wetlands, Oceans and Watersheds to Regions 1-10 Water Division Directors. www.epa.gov/owow/tmdl/2008_ir_memorandum.html

   This EPA memorandum dated October 12, 2006, provides information to assist in the preparation and review of 2008 integrated water quality reports to supplement the information provided in the 2006 Integrated Report Guidance.

4. USEPA (U.S. Environmental Protection Agency). 1991. *Guidance for Water-Quality-based Decisions: The TMDL Process.* EPA 440/4-91-001. U.S. Environmental Protection Agency, Office of Water, Washington, DC. www.epa.gov/OWOW/tmdl/decisions/

   This guidance document explains the programmatic elements and requirements of the TMDL process as established by CWA section 303(d) and by EPA's Water Quality Planning and Management Regulations (40 CFR Part 130). It discusses the process for developing a TMDL, roles of EPA and the states in the process, and supporting or related water programs.

5. Best-Wong, B. 2006. *Clarification Regarding "Phased" Total Maximum Daily Loads.* Memorandum from Benita Best-Wong, Director, Assessment and Watershed Protection Division, to Water Division Directors, Regions 1–10, August 2, 2006. www.epa.gov/owow/tmdl/tmdl_clarification_letter.html

   This memorandum clarifies the *Guidance for Water Quality-Based Decisions: The TMDL Process*, issued in 1991, by explaining EPA's interpretation of the term *phased TMDL* as used in EPA guidance and explaining the distinction between *phased TMDLs*, *staged implementation*, and *adaptive implementation.*

6. EPA's *Guidelines for Reviewing TMDLs Under Existing Regulations Issued in 1992*: www.epa.gov/owow/tmdl/guidance/final52002.html

This Web document provides guidance on the required elements of a TMDL report for use in reviewing and approving TMDLs.

1.4.2. TMDLs and Stormwater

1. EPA's TMDL and Stormwater Resources Web site: www.epa.gov/owow/tmdl/stormwater

2. USEPA (U.S. Environmental Protection Agency). 2007. *Total Maximum Daily Loads with Stormwater Sources: A Summary of 17 TMDLs*. EPA 841-R-07-002. U.S. Environmental Protection Agency, Office of Wetlands, Oceans and Watersheds, Washington, DC. www.epa.gov/owow/tmdl/17_TMDLs_Stormwater_Sources.pdf

   This document summarizes 17 TMDLs that have been developed for stormwater-source pollutants in 16 states, representing a range of pollutants, models used, and different allocation and implementation methods.

3. USEPA (U.S. Environmental Protection Agency). 2007. *Total Maximum Daily Loads and National Pollutant Discharge Elimination System Storm Water Permits for Impaired Water Bodies: A Summary of State Practices*. U.S. Environmental Protection Agency, Region 5, Chicago, IL. www.epa.gov/region5/water/wshednps/pdf/state_practices_report_final_09_07.pdf

   This report summarizes information on TMDL-stormwater practices in 10 states, provides specific TMDL and permit language, and identifies some specific technical and programmatic challenges.

4. Wayland, R.H., and J.A. Hanlon. 2002. *Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs*. Memorandum from Robert H. Wayland, III, Director, Office of Wetlands, Oceans and Watersheds, and James A. Hanlon, Director, Office of Wastewater Management, U.S. Environmental Protection Agency, Washington, DC. www.epa.gov/npdes/pubs/final-wwtmdl.pdf

   This memo clarifies existing EPA regulatory requirements for, and provides guidance on, establishing WLAs for stormwater discharges in TMDLs approved or established by EPA.

5. NRC (National Research Council). 2008. *Urban Stormwater Management in the United States*. Committee on Reducing Stormwater Discharge Contributions to Water Pollution, Water Science and Technology Board, Division on Earth and Life Studies, National Research Council of the National Academies. National Academies Press, Washington, D.C.

   The report provides a description of the history of stormwater management in the United States; an overview of stormwater regulations and the federal regulatory program; and information on a number of relevant scientific and technological issues such as hydrology, geomorphology, biology, monitoring and modeling. The report also provides a number of significant findings and recommendations on how stormwater management in the United States should be improved to achieve better environmental outcomes

1.4.3. NPDES Stormwater Program

1. EPA's NPDES Stormwater program Web site: http://cfpub.epa.gov/npdes/home.cfm?program_id=6

2. EPA's NPDES Stormwater Program Authorization Status: http://cfpub.epa.gov/npdes/stormwater/authorizationstatus.cfm

3. NRC (National Research Council). 2008. *Urban Stormwater Management in the United States.* Committee on Reducing Stormwater Discharge Contributions to Water Pollution, Water Science and Technology Board, Division on Earth and Life Studies, National Research Council of the National Academies. National Academies Press, Washington, D.C.

   The report provides a description of the history of stormwater management in the United States; an overview of stormwater regulations and the federal regulatory program; and information on a number of relevant scientific and technological issues such as hydrology, geomorphology, biology, monitoring and modeling. The report also provides a number of significant findings and recommendations on how stormwater management in the United States should be improved to achieve better environmental outcomes.

1.4.3.1. MS4s

1. EPA's NPDES Stormwater Discharges from Municipal Separate Storm Sewer Systems Web site: http://cfpub.epa.gov/npdes/stormwater/munic.cfm

2. USEPA (U.S. Environmental Protection Agency). 2007. *Municipal Separate Storm Sewer System (MS4) Program Evaluation Guidance.* EPA-833-R-07-003. U.S. Environmental Protection Ageny, Office of Wastewater Management, Water Permits Division, Washington, DC. www.epa.gov/npdes/pubs/ms4guide_withappendixa.pdf and www.epa.gov/npdes/pubs/ms4guide_appendicesb-d.pdf

   This guide is primarily for use by NPDES authorities to evaluate the quality of Phase I and Phase II MS4 programs for permit compliance, technical assistance, and other purposes. It can be used for comprehensive program evaluations or for certain components. MS4 program managers can also use it to evaluate their own programs.

3. USEPA (U.S. Environmental Protection Agency). 2005. *Stormwater Phase II Final Rule Fact Sheet: Small MS4 Stormwater Program Overview.* EPA 833-F-00-002. U.S. Environmental Protection Agency, Office of Water. www.epa.gov/npdes/pubs/fact2-0.pdf

   This three-page fact sheet provides the definition of regulated small MS4s and associated permit requirements for regulated small MS4s.

1.4.3.2. Industrial Activities

1. EPA's NPDES Stormwater Discharges from Industrial Facilities Web site: http://cfpub.epa.gov/npdes/stormwater/indust.cfm

2. List of sectors of industrial activity that require permit coverage: http://cfpub.epa.gov/npdes/stormwater/swcats.cfm

3. USEPA (U.S. Environmental Protection Agency). 1992. *Stormwater Management for Industrial Activities: Summary Guidance on Developing Pollution Prevention Plans and Best Management*

Practices. EPA 833-R-92-002. U.S. Environmental Protection Agency, Office of Water, Washington, DC. www.epa.gov/npdes/pubs/owm0236a.pdf

This document provides guidance on the SWPPP requirements and includes a set of worksheets, a checklist, and a sample SWPPP.

1.4.3.3. Construction Activities

1. EPA's NPDES Stormwater Discharges from Construction Activities Web site: http://cfpub.epa.gov/npdes/stormwater/const.cfm

2. USEPA (U.S. Environmental Protection Agency). 2007. *Developing Your Stormwater Pollution Prevention Plan: A Guide for Construction Sites*. EPA 833-R-060-04. U.S. Environmental Protection Agency, Washington, DC. http://cfpub.epa.gov/npdes/stormwater/swppp.cfm

   This guidance document is a reference for construction site operators who must comply with an NPDES stormwater permit. Through its description of the SWPPP development process, this guidance addresses the type of information required in an SWPPP and could help TMDL writers determine if SWPPPs will provide information and data useful to the TMDL development process.

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Chapter Two
Identifying Opportunities to Coordinate TMDLs and Stormwater Permits

What's included in this chapter

- ✓ Overview of activities used by various state agencies to promote better coordination and communication among TMDL and permit writers.
- ✓ Discussion of opportunities to promote better coordination between TMDLs and stormwater permits at different stages of the development process.

What you should know after reading this chapter

- ✓ Internal reorganization efforts can help to promote better coordination between TMDL and stormwater permitting programs.
- ✓ Options exist for coordinating TMDLs and stormwater permits, even if development schedules are not synchronized.
- ✓ Communication between program staff, as well as affected stakeholders, is key to improving connections between TMDLs and stormwater permits.

Potential roles and responsibilities under this activity

If you are a TMDL writer

1. Find out the names of stormwater permit staff and talk to them about the state's stormwater permitting program.
2. Identify TMDLs on the 303(d) list that might have a stormwater component and share the list of watersheds and municipalities with stormwater permitting staff, along with the associated TMDL development schedule.

If you are a stormwater permit writer

1. Find out the names of TMDL program staff and talk to them about the state's TMDL program.
2. Submit list of permits to be issued or reissued categorized by watershed to TMDL staff to determine status on the 303(d) list and TMDL development schedule.

2. IDENTIFYING OPPORTUNITIES TO COORDINATE TMDLS AND STORMWATER PERMITS

Improving the connection between TMDLs and stormwater permits can start with TMDL and permit writers taking steps to improve communication through efforts such as (1) coordinating programmatic schedules and activities and (2) developing institutional and organizational communication mechanisms. Improved communication at the programmatic level can lead to improved coordination of technical activities, such as assessment and monitoring. Improving internal coordination and communication among TMDL and permit writers can foster good communication and information sharing with key stakeholders, including stormwater sources. As shown in Figure 3, stakeholder and public involvement is an important element of the overall TMDL process. Engaging and involving stakeholders is required under both the TMDL and NPDES Stormwater programs and provides stakeholders with the opportunity to share stormwater related data and information to strengthen and focus the overall TMDL analysis and related implementation efforts. This chapter addresses opportunities to improve coordination and communication both internally and with key stakeholders that affect stormwater management decisions and activities.

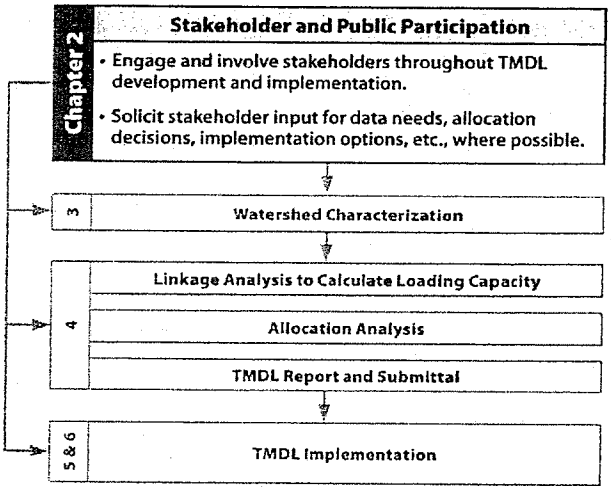


Figure 3. Illustration of the steps in the TMDL process, including the step of stakeholder involvement and public participation.

2.1. Improving Internal Communication and Coordination

Schedules and priorities for the TMDL program are driven by factors such as court-ordered deadlines, waterbody rankings under the section 303(d) list, rotating watershed basin planning approaches, as well as available staff and resources. Factors such as regulatory requirements, permit expiration dates, rotating watershed basin planning and assessment approaches, as well as available staff and resources, affect NPDES stormwater permit development schedules. Regardless of how internal program schedules and priorities are set, it could prove beneficial for TMDL and permit writers to participate in some type of internal planning to determine short-term and long-term schedules for TMDLs and stormwater permit development. Examining internal program schedules is a good starting point for identifying opportunities for coordination and collaboration between the programs.

> ***Resources:*** For more information on approaches states and EPA Regions use to improve coordination between the TMDL and Stormwater programs, refer to the Resources list at the end of this chapter in Section 2.3.

TMDL and permit writers should collectively examine each program's schedule to determine the timing for (1) waterbodies and watersheds with *ongoing* TMDL development activities for impairments with known or suspected stormwater sources; (2) waterbodies and watersheds with *planned* TMDL

development activities for impairments with known or suspected stormwater sources; and (3) general and individual stormwater permits nearing expiration, expired, or administratively continued discharging to impaired waterbodies or within impaired watersheds that have ongoing or planned TMDL development activities. Ultimately, the goal is to identify stormwater source TMDLs and stormwater permits that fall into the following categories: impending, in progress, and developed.

As illustrated in Table 2, there are a variety of ways that TMDL and permit writers can promote better connections between TMDLs and stormwater permits regardless of the development status. Significant opportunities for coordination include activities such as data collection and sharing, stakeholder involvement, permit and TMDL language development, and process administration. It is important to note that coordination opportunities might vary depending on the type of permit used to implement the TMDL. Table 2 highlights where differences in opportunities exist according to permit type.

Planning and scheduling is only one factor affecting internal TMDL and NPDES Stormwater program coordination and collaboration. Organizational structures that affect how easily staff from the two programs can work together also influence TMDL and permit writer coordination and collaboration. Several EPA Regions and state agencies have reorganized to bring the TMDL and NPDES Stormwater programs under a common management unit (e.g., branch, division, group). Some have gone beyond bringing the programs together and have taken steps to ensure further integration either by developing TMDL-stormwater teams or specific positions tasked with promoting stormwater-source TMDL implementation.

Table 2. Potential opportunities for coordination based on status of TMDL and stormwater permit development

Status of TMDL	Status of stormwater permit	Potential opportunities for coordination	
		Individual permit	General permit
Impending	Impending (New or Anticipated Reissuance)	▪ Identify available data, data gaps, and develop integrated approach for collecting additional data ▪ Attempt to synchronize schedules for coordinated development ▪ Develop coordinated TMDL and permit stakeholder involvement process ▪ Conduct collaborative kick-off meeting among TMDL and permit writers and permittee(s) that integrates discussion of TMDL development issues and implementation considerations ▪ Determine how the permit can address future TMDLs	▪ Conduct internal collaborative kick-off meeting among TMDL and permit writers ▪ Determine if TMDL will recommend specific stormwater BMPs recommended to implement the WLA ▪ Coordinate development of TMDL and permit language to ensure consistency ▪ Determine how the permit can address future TMDLs
	In Progress	▪ Consider adjusting permit development schedule to track with TMDL development ▪ Share data and information collected through permit application process with TMDL writers to inform TMDL development ▪ Discuss potential TMDL data needs and incorporate permit requirements that focus on monitoring and other types of data collection that will inform TMDL development	▪ Tailor permit language to acknowledge the need for permittees to review and modify SWMP/SWPPP to achieve consistency with WLAs upon approval of the TMDL

Status of TMDL	Status of stormwater permit	Potential opportunities for coordination	
		Individual permit	General permit
	Developed	▪ Discuss options for modifying the permit to be consistent with TMDL WLA assumptions. ▪ Share data and information collected through permit application process with TMDL writers to inform TMDL development	▪ Determine if the permit will be consistent with TMDLs approved at the time of permit issuance or at the time of NOI submission ▪ Evaluate existing permit language regarding consistency with approved WLAs to determine if it is adequate or requires revision during permit reissuance process ▪ Consider developing a technical appendix/amendment to update existing stormwater permit, without triggering permit modification requirements, to compile and present TMDL requirements upon completion
In-Progress	Impending (New or Anticipated Reissuance)	▪ Discuss TMDL development process and options for WLA categorization to enable sources to implement them through planned permit requirements ▪ Develop specific requirements that directly relate to implementation of the proposed WLAs, such as monitoring and SWMP/SWPPP assessment and modification	▪ Consider including any implementation planning information from the TMDL into the permit either directly or by reference ▪ Identify data gaps discovered through the TMDL development process and determine what type of permit requirements are appropriate to include to facilitate filling data gaps for potential future revision of the TMDL or to support adaptive management activities
	In Progress	▪ Compare information collected to date under each program to ensure that each process is working with the same data and information and to determine if one program can fill any data gaps identified by the other program ▪ Attempt to streamline interaction with stakeholders by conducting joint meetings or consolidating data requests ▪ Identify activities under each process to determine if there is any overlap and any opportunity for integrating remaining activities ▪ Ensure that any language used in both the TMDL and the permit are consistent; provide updates on changes to language as necessary	▪ Identify activities under each process to determine if there is any overlap and any opportunity for integrating remaining activities ▪ Ensure that any language used in both the TMDL and the permit are consistent; provide updates on changes to language as necessary
	Developed	▪ Review existing permit requirements and required permit documents (e.g., SWMPs and SWPPPs) to determine if existing permittee-generated data and information can facilitate remaining TMDL development activities ▪ Discuss options for modifying the permit to be consistent with TMDL WLA assumptions and requirements	▪ Determine if the permit will be consistent with TMDLs approved at the time of permit issuance or at the time of NOI submission ▪ Evaluate existing permit language regarding compliance with proposed WLAs to determine if it is adequate or requires revision during permit reissuance process ▪ Consider developing a technical appendix/amendment to update existing stormwater permit, without triggering permit modification requirements, to compile and present TMDL requirements upon completion

Status of TMDL	Status of stormwater permit	Potential opportunities for coordination	
		Individual permit	General permit
Developed	Impending (New or Anticipated Reissuance)	▪ Review the approved WLA to determine how best to reflect the input factors and pollutant loads established in the WLA for implementation into new or reissued permit requirements ▪ Identify any TMDL implementation planning activities or information that the permit could incorporate or reference to help permitted stormwater sources implement the approved WLA	▪ Determine most feasible and appropriate requirements to include in the permit to demonstrate SWMP or SWPPP progress toward implementing the WLA ▪ Consider developing a technical appendix/amendment to compile and present TMDL information
	In Progress	▪ Review draft permit conditions to ensure consistency with the approved WLA and any TMDL implementation plan recommendations ▪ Develop and incorporate tailored monitoring requirements to assess progress toward implementing the WLA	▪ Review draft permit conditions to ensure requirements related to impaired waterbodies with approved TMDLs reflect WLAs and , if applicable TMDL implementation plan recommendations ▪ Ensure that draft permit conditions include meaningful monitoring and assessment requirements that will support adaptive management activities
	Developed	▪ Assess if current permit conditions are consistent with approved WLA ▪ Determine if mechanisms exist to assess progress toward implementing WLAs ▪ Plan potential changes to future versions of the permit	▪ Assess if current permit conditions are consistent with approved WLA ▪ Determine if mechanisms exist to assess progress toward implementing WLAs ▪ Plan potential changes to future versions of permit conditions

In Practice: Efforts to Promote Improved Coordination Between TMDL and Permit Activities

States and EPA are making strides to promote improved coordination between TMDL and permit writers. A few examples of internal efforts are provided below.

Consolidating stormwater-source TMDL development with one group. The Vermont Department of Environmental Conservation has a Stormwater Management Section that focuses on administering the state's stormwater program—both the federal NPDES Stormwater program and the state-authorized SWMP. Although staff in this section address stormwater permitting issues, they also tackle TMDL development if the impairment involves stormwater. TMDL staff hand off stormwater-related TMDL development and implementation to staff in the Stormwater Management Section that have expertise both in permitting issuance and stormwater BMP implementation.

Assigning staff to coordinate and promote implementation. In Minnesota and Tennessee, the state agencies have recently created new positions intended to promote successful stormwater management implementation and connection to the TMDL program, as well as other related requirements. Oregon assigns one person to coordinate TMDL development and permitting within one watershed, although that one person might not necessarily be responsible for actually developing the TMDLs or crafting permit language.

Bringing staff physically and organizationally together. Promoting more effective communication and data sharing often requires reorganizing staff to share physical space or space on an organizational chart. EPA Region 2 reorganized TMDL and permit staff to bring them together under one branch. EPA Region 10 physically moved TMDL and permit staff to share a common area. EPA Region 4 is reorganizing to include TMDL development, permits, and nonpoint sources together in one branch

Facilitating regular communication. EPA headquarters works with EPA Regional Offices to host monthly TMDL and Stormwater Workgroup conference calls. These internal calls provide EPA TMDL and permit staff from every region with the opportunity to exchange information and ideas related to TMDL development and implementation through stormwater permits. The group participates in developing technical resources and

shares information on TMDL and stormwater projects. EPA Region 4 conducts bimonthly conference calls with state TMDL and stormwater permit staff to exchange information and ideas on issues affecting coordination between the two programs.

2.2. Improving Stakeholder Communication and Coordination

Another reason to promote coordination between TMDL and permit writers is to enable key stakeholders, including stormwater sources, to participate in the TMDL development process. Permit writers can help to encourage stormwater sources to participate in the TMDL development process and facilitate information sharing. Although TMDL writers are likely to work with permit writers to obtain permit-related information from stormwater sources, there might be instances when TMDL writers have to go directly to stormwater sources to obtain information and data. Stormwater sources might have an additional level of comfort and willingness to share information knowing their permit writer is involved in the process.

Resources: For more ideas and strategies to involve stakeholders, refer to the Resources list at the end of this chapter in Section 2.3.2.

Stakeholder involvement is an essential component of both the TMDL development and NPDES permitting process. Both the TMDL and the NPDES programs contain regulatory requirements for public participation that involve activities such as public review, public notice, public hearings, and public comment periods Ideally, TMDL and permit writers should identify and involve stakeholders early in both the TMDL development and NPDES permitting processes. The primary stakeholders in the TMDL and NPDES processes are parties directly affected by the TMDL allocations or the permit requirements. In the case of stormwater source TMDLs, the primary stakeholders are permitted stormwater sources that will receive a WLA under the TMDL and must implement the WLA through stormwater permits. In addition to permitted stormwater sources, other stakeholders include those affected by the TMDL and permitting decisions or have information to contribute to the process, such as local environmental organizations, homeowner associations, universities, local developers, and city planners.

Providing data and information is one of the most significant contributions that stakeholders can make to the stormwater source TMDL development process. TMDL and permit writers can consider opportunities and approaches to facilitate information exchanges and technical participation in the TMDL development process. These opportunities could include face-to-face information exchange meetings, facility visits, focus group meetings for feedback on technical issues pertaining to stormwater source WLA development and associated permit requirements, or regular group conference calls to discuss ideas and progress. As mentioned in the previous section, permit writers might have access to much of the data and information generated by stakeholders through compliance with existing stormwater permit requirements. (Chapter 3 of this Handbook provides a discussion of the types of information sources generate through stormwater permit requirements and how TMDL writers can use this information in the stormwater source TMDL development process.)

In Practice: Using Stakeholder Data and Information to Identify High-Priority Stormwater Sources

The 2007 Charles River watershed (Massachusetts) pathogen TMDL relies on data from the Charles River Hot Spot monitoring effort to identify and prioritize bacterial sources of pollution. This monitoring effort, crucial to the TMDL development process, is the result of a single watershed stakeholder dedicated to voluntarily kayaking the Lower Charles River shoreline to conduct sampling after rain events. From 2002 through 2005, this dedicated watershed stakeholder followed sampling procedures detailed in the approved Charles River Watershed Association Quality Assurance Project Plan (QAPP) for fecal coliform. He was able to collect samples from several hundred storm drain outfalls during this period. Data from this stakeholder-based monitoring effort allowed the Massachusetts Department of Environmental Protection to identify and prioritize 31 stormwater outfalls along the Lower Charles River as high-priority bacterial sources in the TMDL analysis. Ultimately, the data collected by this dedicated watershed stakeholder will help the Massachusetts Department of Environmental Protection and other key stakeholders target future bacterial source tracking efforts and implementation activities.

In Practice: Locally Led TMDL Implementation

The DuPage River Salt Creek Workgroup (DRSCW) is a collaborative stakeholder effort by sanitary districts, municipalities, counties, forest preserve districts, state and federal agencies, and private environmental organizations to address the water quality impairments identified in chloride and dissolved oxygen TMDLs for branches of the DuPage River and Salt Creek (Illinois). Although Illinois EPA held public meetings during the development of the TMDL reports, a watershed-based stakeholder group did not exist in the area when the TMDL reports were written. Stakeholders affected by the TMDL allocations wanted an opportunity to *substantiate* implementation strategies and determine whether there were other cost-effective options for achieving water quality standards (DRSCW 2004). Representatives from municipalities affected by the TMDL reports discussed forming the workgroup to collect data and carry out other technical activities to move forward with implementing the TMDLs. It was also envisioned that the DRSCW could help stakeholders establish a solid foundation for future TMDLs, contribute to developing nutrient criteria, and address other water quality or regulatory issues in the watersheds. A core group of municipalities generated support for the workgroup concept by emphasizing the importance of locally led decisions on where and how to spend local money to address water quality issues.

2.3. Resources

2.3.1. TMDL and Stormwater Permitting

1. EPA's TMDL and Stormwater Web site: www.epa.gov/owow/tmdl/stormwater/

2. USEPA (U.S. Environmental Protection Agency). 2007. *Total Maximum Daily Loads and National Pollutant Discharge Elimination System Storm Water Permits for Impaired Water Bodies: A Summary of State Practices*. U.S. Environmental Protection Agency, Region 5, Chicago, IL. www.epa.gov/region5/water/wshednps/pdf/state_practices_report_final_09_07.pdf

   This EPA report summarizes information on TMDL-stormwater practices in 10 states, provides specific TMDL and permit language, and identifies some specific technical and programmatic challenges.

2.3.2. Identifying and Involving Stakeholders

1. USEPA (U.S. Environmental Protection Agency). 2008. *Handbook for Developing Watershed Plans to Restore and Protect Our Waters*. EPA 841-B-08-002. U.S. Environmental Protection Agency, Office of Water, Nonpoint Source Control Branch, Washington, DC. www.epa.gov/nps/watershed_handbook/

   Chapter Three: Building Partnerships (www.epa.gov/nps/watershed_handbook/pdf/ch03.pdf): This chapter provides guidance on initial activities to organize and involve interested parties in watershed-based water quality protection activities. Topics include identifying stakeholders, integrating other key programs, and conducting outreach.

2. Conservation Technology and Information Center Web site, *Know Your Watershed: Building Local Partnerships*: www2.ctic.purdue.edu/KYW/Brochures/BuildingLocal.html

Chapter Three
Characterizing Impairments and Stormwater Sources

What's included in this chapter

- ✓ General description of the types of impairments resulting from stormwater.
- ✓ Description of the commonly used types of data analyses to understand the impairment being addressed in a TMDL.
- ✓ Discussion of setting TMDL targets for TMDLs with stormwater sources.
- ✓ Discussion of identifying potential sources to include in the TMDL analysis.
- ✓ Description of the types of data generated by stormwater dischargers that TMDL writers can use to better understand the relative contribution of stormwater sources to a waterbody impairment.

What you should know after reading this chapter

- ✓ What data and information can help to characterize the impairment to support identification of TMDL targets and potential sources.
- ✓ What information is available to accurately and comprehensively include stormwater sources in the watershed characterization for TMDL development.
- ✓ How TMDL writers can work with permit writers to determine the availability and the value of the stormwater discharger information before investing time and energy into data collection.

Potential roles and responsibilities under this activity

If you are a TMDL writer

1. Analyze waterbody and watershed data to characterize the impairment related to the stormwater impacts.
2. Identify whether stormwater sources are contributing to the impairment addressed in your TMDL.
3. Coordinate with stormwater permit staff to obtain existing data and information from stormwater permittees.
4. Use available data to characterize stormwater sources and their potential contribution to water quality impairments.

If you are a stormwater permit writer

1. Share existing stormwater discharger generated data available in-house with TMDL writers.
2. Serve as a liaison between TMDL writers and stormwater permittees to streamline the data sharing process.

3. CHARACTERIZING IMPAIRMENTS AND STORMWATER SOURCES

The general process for developing a TMDL including stormwater sources is much the same as that for developing any TMDL, including the following typical steps:

- Watershed characterization to identify the watershed, waterbody, and impairment conditions; TMDL targets; and potential sources
- Linkage analysis to calculate the loading capacity
- Allocation analysis to evaluate and assign WLAs to point sources and LAs to nonpoint sources
- Development of the TMDL report and administrative record for submittal to EPA

While these steps are common to all TMDL development projects, there are a number of considerations for each step when developing TMDLs that address stormwater sources. As shown in Figure 4, this chapter discusses the step of watershed characterization, and the remaining steps to calculate the loading capacity, establish allocations and document the TMDL report are discussed in Chapter 4.

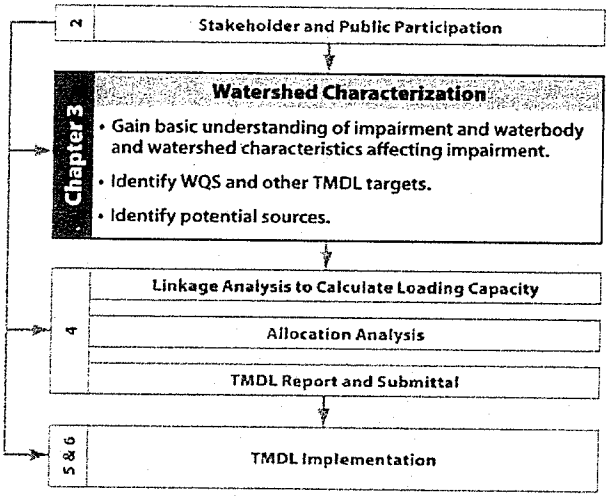


Figure 4. Illustration of the steps in the TMDL process, including the step of watershed characterization discussed in this chapter.

The TMDL process requires a thorough understanding of the waterbody and watershed characteristics, available data, causes of impairment, sources, water quality standards, and potential targets. Some of this information will be available through a state's 303(d) list and waterbody assessment documentation, but much of the information will be gathered and summarized while completing the TMDL. Collectively, this is referred to here as the *watershed characterization* step of the TMDL. Watershed characterization serves as the foundation of the TMDL analysis, providing a basic understanding of the impairments of concern, the desired levels for restoration (e.g., water quality standards and TMDL targets) and the likely sources contributing to the impairment. Characterizing the waterbody and the associated impairments as well as the sources and other watershed characteristics provides the necessary background information to support decisions regarding the approach used for calculating the TMDL, the level of detail or focus of the analysis, and ultimately TMDL implementation. The following sections describe the major elements of the watershed characterization:

- Understanding the impairment
- Identifying TMDL targets
- Identifying and assessing potential sources

At the end of the watershed characterization step for a TMDL addressing stormwater sources, the TMDL writer should understand how stormwater is affecting the impaired waterbody, what stormwater sources exist in the watershed, and what data and information are available to characterize the sources.

3.1. Understanding the Impairment

Understanding the impairment(s) being addressed by a TMDL is critical to establishing appropriate TMDL targets, identifying potential sources and eventually selecting a technical approach for calculating the loading capacity. The main objective of this step is to identify the nature of the impairment(s) being addressed by the TMDL, including location, timing, and magnitude of impairment. A state or tribe's 303(d) list identifies the basic information regarding the impaired waterbody and the observed impairment, usually including the waterbody characteristics (e.g., name, location, size), the water quality standard that was violated, the pollutant of concern (if known), and the suspected causes and sources contributing to the impairment. It is usually necessary to analyze available monitoring data to further characterize and understand the impairments. This section first introduces the commonly observed impairments associated with stormwater and discusses how stormwater can affect waterbody conditions. The section then describes the types of data analyses that are typically used to support characterization of impairments for TMDL development, highlighting the issues unique to developing stormwater TMDLs.

It is important to note that flow is a key component in characterizing, developing and implementing TMDLs for stormwater sources and is discussed throughout this Handbook. Quantity of flow and variation in flow regimes are important factors in transporting stormwater pollutants such as metals, pathogens or sediments that violate water quality standards. Flow is taken into account when developing loading analyses, and flow is specifically considered when calculating seasonal variation and critical conditions in a TMDL. The TMDL regulations specify that TMDLs can be expressed in terms of either mass per time, toxicity or other appropriate measure, and flow has been used as a surrogate for stormwater pollutants, as discussed in Section 3.2. Flow is also a critical component to consider when TMDLs are being implemented. Additonal information on this is presented in Chapter 5 and Chapter 6.

> ***Resources:*** Several EPA documents include discussion of flow in developing TMDLs and are included in the Resource section at the end of this chapter in Section 3.4.2. In addition, Resource sections at the end of other chapters include TMDL documents available for further information.

3.1.1. Stormwater Effects on Receiving Waterbodies

The purpose of this section is to briefly summarize the effects that stormwater has on streams and lakes and other receiving waterbodies. Stormwater can affect waterbodies in a number of ways depending on the type of stormwater source and the waterbody characteristics. While stormwater sources can include illicit discharges and dry-weather flows, most stormwater sources represent precipitation-driven runoff from impervious and pervious surfaces. The effects of stormwater runoff have been well documented in multiple journal aricles, books and other publications. Most recently, the National Research Council has issued a report, *Urban Stormwater Management in the United States* (NRC 2008), that describes in detail the hydrologic, geomorphic, and biological effects of urbanization on watersheds. The conclusions derived from these reports are that increased imperviousness and stormwateer discharges can lead to the following effects:

- Altered stream hydrology, including higher peak flows, higher peak flow duration, lower base flows, and decreased groundwater recharge
- Increased pollutant loadings associated with higher runoff volumes (from increased imperviousness)

These two processes—flow alterations and increased pollutant loading—are the primary causes of stormwater effects on receiving waters. These effects on both water quantity and water quality can in turn cause impairment to a number of designated uses, as shown in Table 3. For example, flow alterations can cause impairments, especially to aquatic life, by altering habitat, increasing channel instability, causing stream incision, increasing bank erosion, causing riparian degradation, and altering sediment supply and transport (Burton and Pitt 2001). Increases in pollutant loading from stormwater sources can create conditions that are harmful to human health, fish, and other aquatic life. Pollutants that are typically associated with stormwater runoff include pathogens, metals, sediment, nutrients, chlorides, pesticides, oil and grease, toxic organics, and polychlorinated biphenyls (PCBs) (Burton and Pitt 2001). The type of pollutant varies for each area depending on the specific sources within a watershed. In addition, permitted stormwater includes unique sources that are not necessarily precipitation-driven such as illicit discharges and dry-weather flows (e.g., from lawn watering or car washing). These types of stormwater sources are typically associated with effects due to water quality rather than water quantity.

Resources: For more information on stormwater impacts to receiving waters, refer to the Resources list at the end of this chapter in Section 3.4.1.

Table 3. Examples of the effect of stormwater runoff on common designated uses

Designated use	Water quantity effects	Water quality effects
Aquatic Life	Change in stream hydrology resulting in habitat modification and degradation (e.g., change in riffle/pool ratio, streambed alteration, stream incision and streambank erosion, change in sediment transport)	▪ Degradation of receiving water quality that can be detrimental to aquatic life (e.g., increased turbidity, increased temperature, eutrophic effects from increased nutrients)
Recreation	Alteration of stream channel or lake bathymetry impairing swimming or boating uses	▪ Increased pollutant levels that pose a risk to human health (e.g., bacteria, metals) ▪ Increased pollutants that degrade aesthetics (e.g., nutrients resulting in algal growth, oil and grease and litter causing odors or floatables)
Drinking Water	Less opportunities for infiltration to recharge groundwater supplies that serve as public drinking water	▪ Increased pollutant levels that pose a risk to human health (e.g., bacteria, metals) ▪ Increased pollutants that impede function of drinking water intakes (e.g., nutrients resulting in algal growth, blocked intakes from litter or increased sediment)

3.1.2. Data Analysis to Characterize Impairment

The analysis of waterbody monitoring data (e.g., flow, water quality, biological) supports an understanding of impairments by determining when, where, and under what conditions the problems are evident. These answers help to define many of the

Resources: For more information on where to obtain water quality and flow data, refer to the Resources list at the end of this chapter in Section 3.4.3.

technical aspects of the TMDL, including what targets are appropriate, what sources are quantified, what approaches can be used, how allocations are determined, and on what time and spatial scale the analysis is conducted. Important aspects of the data analysis to understand the impairments for a TMDL include the following:

> ***Tip: Using data analysis to support source identification***
>
> Data analysis to understand the impairment is typically conducted in tandem with source identification activities (as discussed in Section 3.3). Analysis of waterbody data along with review of watershed land uses, source locations, and other source information helps to determine what sources exist and whether they are affecting impairment.

- Data analysis to identify pollutant of concern or expected causes of impairment in cases of a listing based on general or biological impairment
- Spatial analysis to identify spatial variations in waterbody and watershed conditions to identify environmental conditions or sources that affect impairment
- Temporal analysis to evaluate the timing of impairment and potential source loading or other conditions contributing to impairment
- Analysis of the relationships among multiple parameters or waterbody measures (e.g., pollutant concentration and flow) to understand impairment conditions and identify potential sources
- Review of results of data analyses to identify critical conditions to support identification of TMDL targets and select appropriate TMDL development approach

The following sections provide more detail on these common types of data analyses to support the characterization of impairments. These analyses also help to identify potential sources and evaluate their effect on impairment. Section 3.3 will discuss other activities and information that can help to identify sources and can be evaluated concurrently with the waterbody data to assess sources.

3.1.2.1. Identifying Pollutants or Other Causes of Impairment

Impaired waterbodies affected by stormwater sources are often listed as impaired due to such things as *biological impairment* or *habitat alteration* rather than for specific pollutants (e.g., metals, sediment). These listings are typically based on biological assessments or violations of biocriteria. Biological communities can show a response from multiple stressors or from a series of combined stressors such as water column pollutants, flow alterations, channel alterations, and other habitat alterations. Therefore, it might be difficult to identify the pollutant or suite of pollutants affecting the biological community.

EPA developed the *Stressor Identification Guidance Document* (USEPA 2000c) to help practitioners determine which pollutants might be affecting biological communities. The stressor identification (SI) document covers the organization and analysis of available evidence to determine the cause of biological impairment. The general SI process entails critically reviewing available information, forming possible stressor scenarios that might explain the impairment, analyzing those scenarios, and producing conclusions about which stressor(s) are causing the impairment. The SI process is iterative, usually beginning with a retrospective analysis of available data, and the accuracy of the identification depends on the quality of data and other information used in the process. If the SI process identifies specific pollutant parameters (e.g., sediment, nutrients, temperature) that are causing the biological impairment, TMDL writers can establish targets for the pollutant(s) and use additional waterbody

> ***Resources:*** For more information on conducting biomonitoring, bioassessment, biocriteria or where to obtain biological data, refer to the Resources list at the end of this chapter in Section 3.4.4.

and watershed information (e.g., analysis of ambient in-stream data, field reconnaissance) to identify potential sources.

However, because biological impairments often represent the cumulative effects of a number of stressors, it might not be possible to isolate a pollutant or even multiple pollutants as the primary cause of impairment. The impairment might be the result of hydrological and physical changes from the change in flow patterns often associated with impervious areas as well as the increase in pollutant loading. In these instances, the TMDL might be developed for a surrogate target that represents the combined effects from stormwater. Identifying TMDL targets, including the use of surrogates, is discussed in Section 3.2.

3.1.2.2. Identifying Spatial Patterns

> ***Tip: Use data analysis to support approach selection***
>
> The conclustions drawn during data analyses will help to define the technical needs of the TMDL development approach. Chapter 4 discusses selecting a TMDL approach.

Analyzing waterbody data to identify spatial variations in waterbody conditions and impairment can help to identify sources or waterbody or environmental conditions that are contributing to impairment. For instance, evaluating the data to identify spatial variations in water quality can identify *hot spots* where sources are affecting a greater impact on water quality. A hot spot downstream of an urban area might indicate that stormwater is a potentially significant source. Spatial evaluation can also be useful in evaluating the effects of different land uses or stormwater source types. For example, comparing monitoring data from sites representative of heavily developed commercial or industrial areas to data representative of residential or undeveloped areas can help to evaluate the relative significance of the different land use types discharging to an MS4.

Although the data might not always be available to support it, evaluation of conditions upstream and downstream of a suspected source can help to determine whether it has an effect on water quality. Figure 5 presents paired (i.e., collected at the same time) total suspended solids (TSS) readings from stations upstream and downstream of a landfill that discharges runoff into a small stream. It was expected that the landfill might be a source of nutrients and sediment to the stream. Data were plotted together to evaluate the corresponding conditions upstream and downstream. Also plotted in Figure 6 is a line representing a 1:1 linear relationship, where the values upstream would be equal to those downstream. As shown in the figure, the downstream measurements are typically higher than those upstream of the landfill, suggesting that the landfill could be a significant source of TSS to the stream.

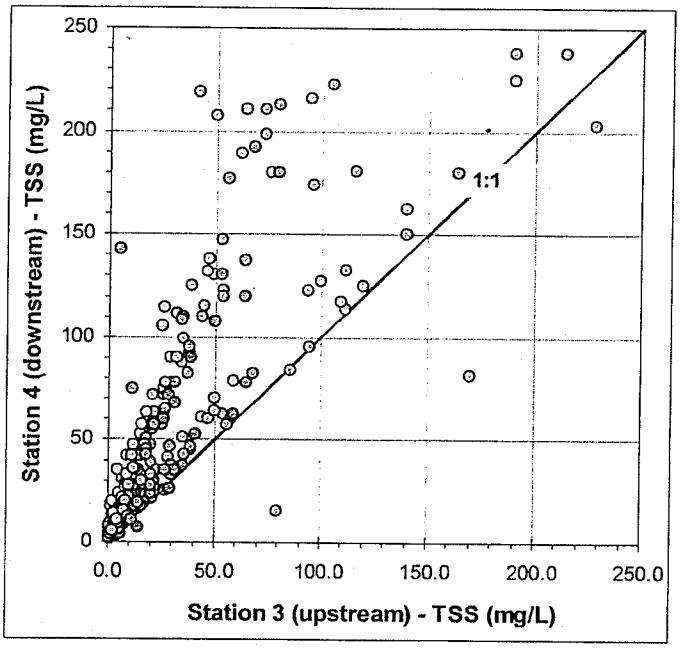


Figure 5. Analysis of upstream and downstream data to evaluate potential impact of an expected source.

3.1.2.3. Identifying Temporal Trends

TMDL writers can also assess data for temporal trends to better understand the impairment and identify potential sources. Temporal variations in water quality, whether from month to month or year to year, can be the result of trends in environmental conditions, such as weather and resulting runoff and flows, or from variations in loading because of schedules or variations in source activities. For example, open areas or parks that drain to MS4s can experience increased wildlife activity or dog walking during summer months, potentially increasing pathogen loads. Similarly, increased loads of sediment or chlorides can occur during winter months from use of sand and deicers on roadways during winter weather.

Longer-term, temporal variations such as trends over a decade rather than across seasons can also provide clues about watershed sources. Figure 6 illustrates a data analysis that evaluates both spatial and temporal variations using data from two stations on the same stream and collected over a 4-year period. The graph of time-series turbidity data shows that a significant increase in turbidity occurred in 2001 at the downstream station; since then, the levels have been consistently higher than upstream. Because upstream levels were measured at comparable levels before and after 2001, the data at the downstream station might suggest the introduction of a new source discharging between the two stations and contributing to the turbidity levels in the stream.

While source activity can affect temporal variations in water quality, they are more often related to environmental conditions such as flow. Evaluating the relationship among water quality, flow, and seasonality can be done using a variety of techniques including simple visual comparison of graphed time-series data, regression analyses, or the use of flow duration curves. Figure 7 includes examples of

each of these types of data representation using the same data set. As shown in the figure, all the figures can be used to show the relationship between bacteria and flow. While the regression plot does not show a strong correlation between flow and bacteria, the chronological and flow duration graphs show that they do tend to follow similar patterns, with elevated bacteria typically occurring during higher flows.

Because discharges from certain types of stormwater sources are typically observed during particular flow conditions, evaluations of flow and corresponding water quality can be a helpful tool in identifying potential sources of impairment. Many stormwater sources are related to increased runoff that can carry pollutants from impervious surfaces, such as parking lots and rooftops, and also lead to streambank or surface erosion, especially in areas of land-disturbing activities such as construction. Therefore, a waterbody influenced by stormwater would likely have observed water quality problems occurring at higher flows. However, waterbodies exhibiting the inverse relationship, with higher pollutant concentrations at lower flows, can also indicate MS4 sources such as illicit discharges to the storm sewer. Figure 8 depicts an example of pollutant loadings observed during low-flow conditions, possibly indicating illicit discharges entering the MS4 through either direct connections (e.g., sanitary sewer piping connected to storm drains, failing septic drain fields connected to ditches that are part of an MS4 conveyance system) or indirect connections (e.g., infiltration into the MS4 pipes from cracked sanitary systems).

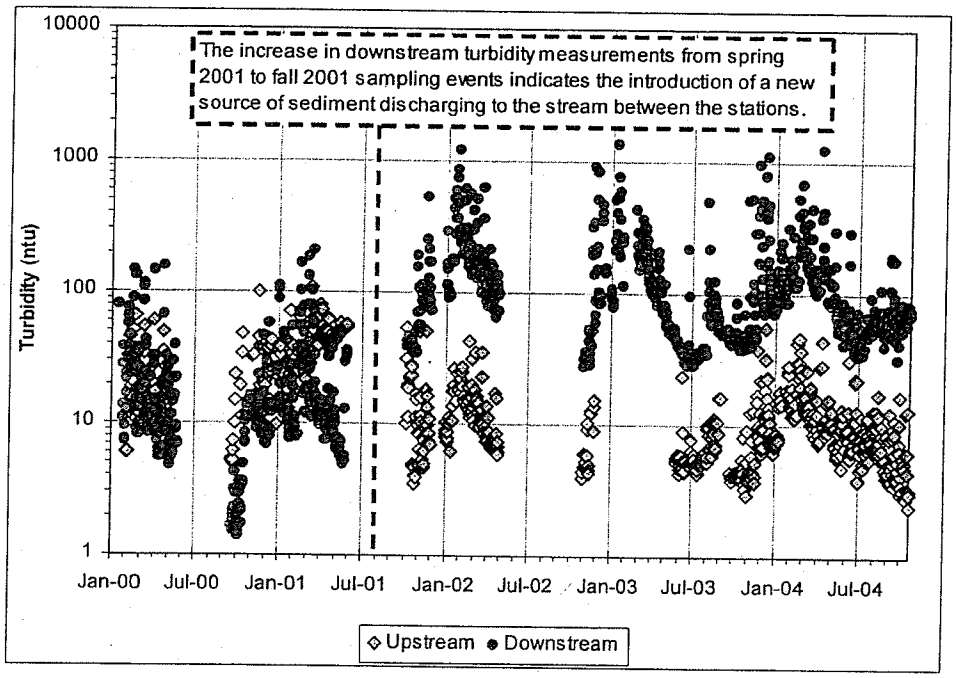
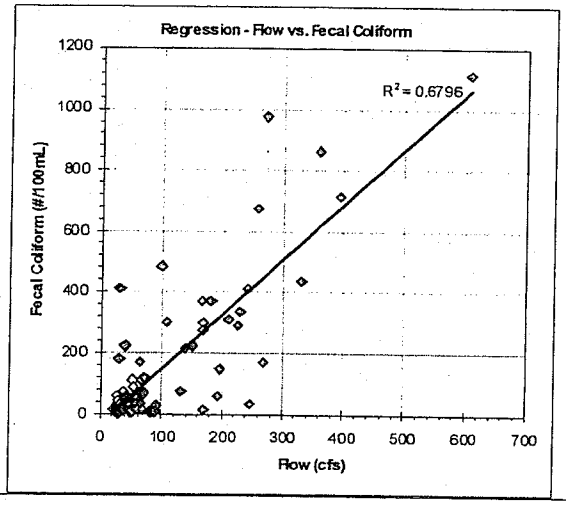
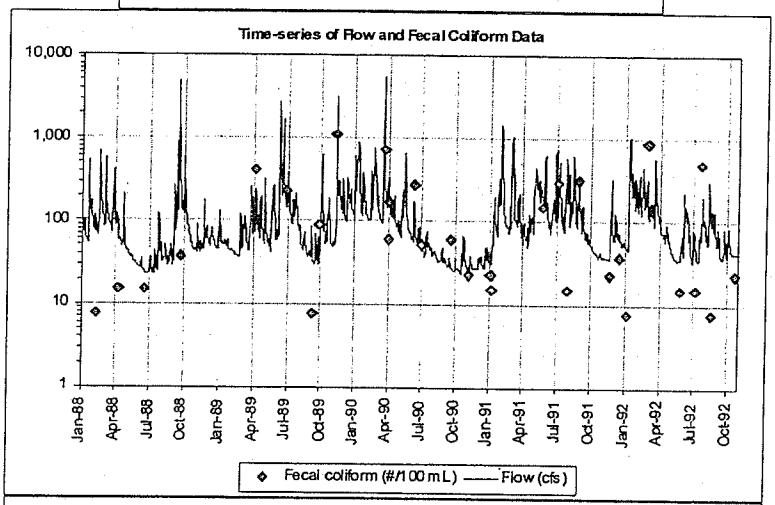


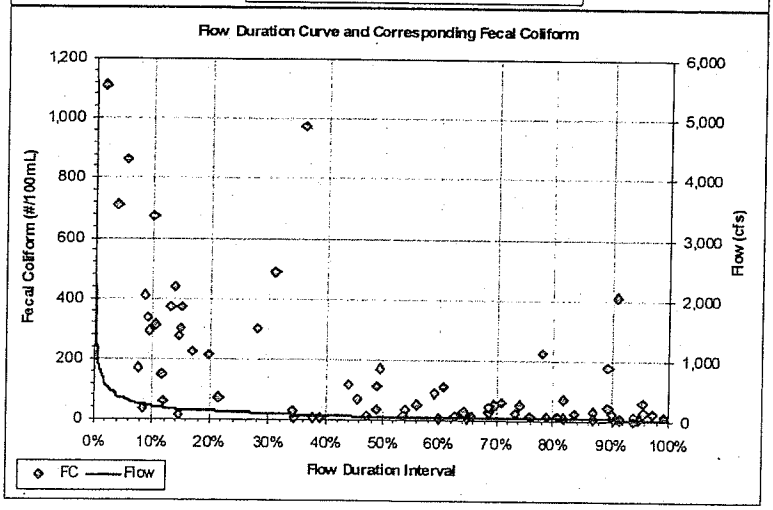
Figure 6. Evaluation of spatial variations in turbidity data to identify locations of potential sources.



Regression of matching measurements of fecal coliform and flow. R^2 of 0.7 might not indicate a strong correlation, but plot does show that the highest fecal coliform measurements occurred during high flows.

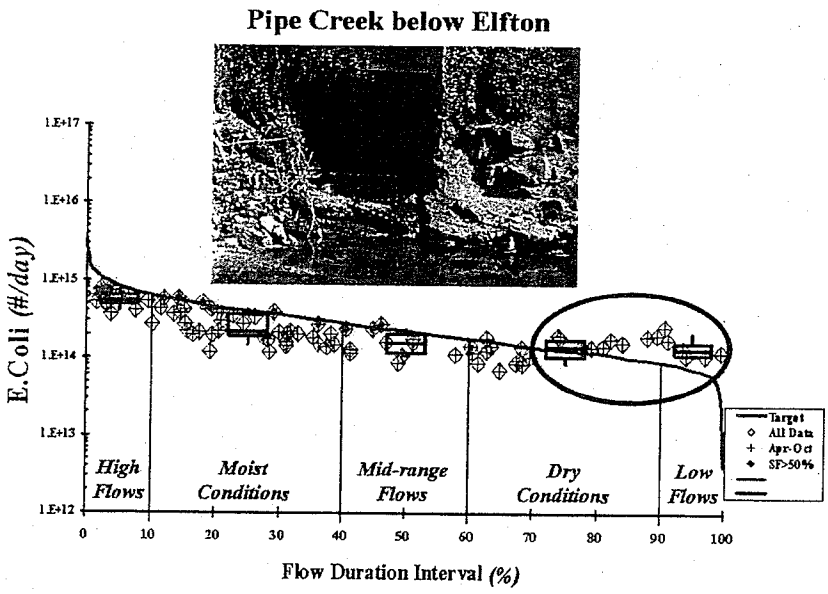


Chronological graph showing continuous flow data and instantaneous fecal coliform measurements. Plot indicates that higher measurements of fecal coliform generally correspond to times of higher flows.



Flow duration curve for continuous flow dataset shown above. Instantaneous fecal coliform measurements are plotted based on the corresponding flow duration interval of the flow measured on the sample date. Plot indicates that higher measurements of fecal coliform generally correspond to higher flows.

Figure 7. Examples of different data representations to evaluate the relationship between flow and fecal coliform.



Stormwater Source: *Illicit Discharges*

Figure 8. Duration curve analysis indicating illicit discharges as stormwater source. Circled data points represent those exceeding the target for *Escherichia coli*.

3.1.2.4. Evaluating Relationships among Parameters

Evaluating the relationship among pollutants can also help TMDL writers to understand observed impairments and identify the types of sources in the watershed. Many pollutants causing impairments can originate from common watershed sources. If a waterbody is impaired by multiple pollutants, evaluating trends or patterns in all pollutants can investigate the potential of common sources among pollutants. For example, sediment, chlorides, and litter are often associated with road maintenance for snow and ice removal. Observed impairments by these parameters in the same waterbody segment might indicate snow removal activities as a source. Similarly, pathogens and nutrients often share common sources that could be contributing to stormwater loads, such as landfills, sanitary sewer breaks, and wildlife or domestic pet waste.

In addition, some pollutants might be associated with other pollutants. For example, some pollutants (e.g., nutrients, metals) can be delivered to receiving waters adsorbed to sediment particles. Fertilizer or pesticide application in residential, commercial, or industrial areas can experience an accumulation of contaminants (e.g., nutrients, pesticides) that have adsorbed to sediment. Soil erosion and washoff in these areas can result in the delivery of loads of sediment and associated contaminants. Identifying a relationship between increased sediment concentrations and other pollutants can help to identify these situations to understand the nature of the impairment and identify potential sources.

3.1.2.5. Identifying Critical Conditions

EPA regulations require that the TMDL writer consider critical conditions while developing a TMDL. Evaluating the critical conditions builds on the previous analyses of spatial and temporal trends and

relationships among pollutants and processes and identifies the combination of environmental conditions (physical, chemical, and biological) under which impairment occurs. When addressing stormwater sources, understanding the critical conditions can be crucial when identifying a TMDL target. Especially without an applicable numeric water quality criterion or when dealing with a biological impairment, evaluation of the critical conditions will help determine the causes and conditions associated with the impairment, such as times of elevated pollutant concentrations or high flows. As with all the other analyses discussed, understanding critical conditions can provide clues about the location, timing, and type of sources affecting impairment and guides selection of an appropriate TMDL development approach (as discussed in Section 4.2.3).

3.2. Identifying TMDL Targets

Impaired waterbodies requiring TMDLs are included on state 303(d) lists because of violations of water quality standards. Water quality standards include the designated use of a waterbody, the water quality criteria established to protect that use, and an antidegradation policy. Water quality criteria can be expressed as numeric or narrative criteria, affecting both the nature of the listing and developing the resulting TMDL. All TMDLs must have a numeric target for which to calculate a loading capacity. Figure 9 illustrates the potential steps or options for developing targets for TMDLs that include stormwater sources. When developing a TMDL for a waterbody listed for a specific pollutant that has an associated numeric criterion, the criterion serves as the target for the TMDL. However, many impaired waterbodies affected by stormwater sources are listed as impaired by pollutants with narrative criteria (e.g., sediment, nutrients) or due to biological impairments (e.g., biological assessments indicate poor benthic communities, increase in *tolerant* species, or decrease in fish populations). In such cases, it is necessary for the TMDL writer to identify a numeric TMDL target that can be used for calculating the loading capacity. When waters are listed for biological impairments, sometimes a TMDL writer will use data analysis and SI to identify a specific pollutant(s) (e.g., sediment) contributing to the impairment (as discussed in Section 3.1). If a specific pollutant is identified relating to a biological impairment, the TMDL writer can identify a numeric target based on data analysis (e.g., reference conditions, historical conditions) or appropriate site-specific or regional literature values. Similarly, a numeric target can be identified for a pollutant that does not have associated numeric criteria.

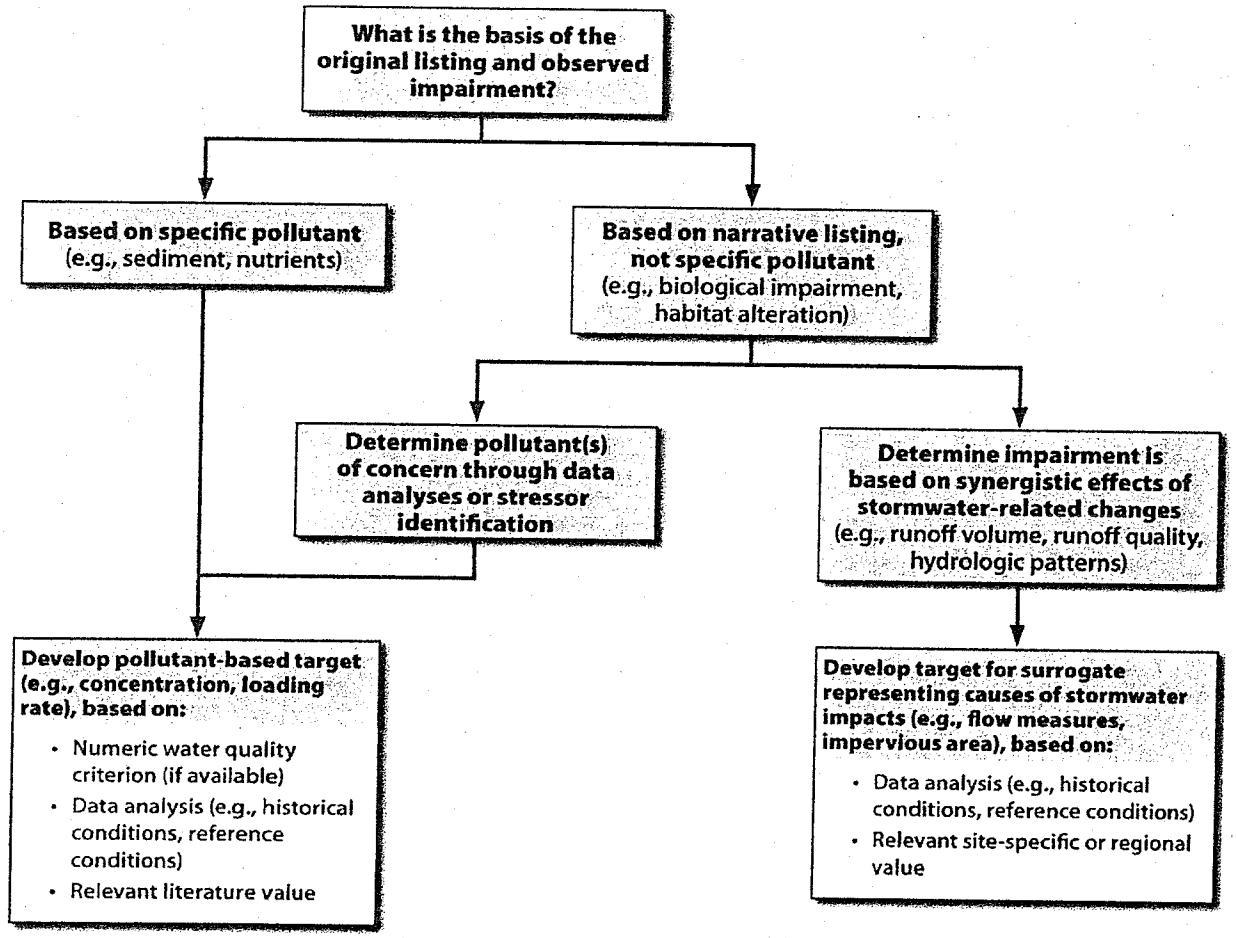


Figure 9. Options for identifying targets for TMDLs that include stormwater sources.

However, when dealing with stormwater effects on an impaired waterbody, it might be difficult to identify all the specific pollutants that are related to the impairment. The underlying problem might be due to hydrologic changes such as quantity of flow and variation in flow regimes that are important factors in transporting pollutants (e.g., metals, pathogens, sediment) that can violate water quality standards. For instance, the impairment might be the result of pollutant loads from flow-related in-stream scouring and and also increased pollutant loads being transported from specific activities within the stormwater source's drainage area (e.g., road sanding, pesticide treatments to lawns) or more generally because of the increased runoff from impervious surfaces. Therefore, when developing a stormwater TMDL, a TMDL writer might use a surrogate measure (e.g., flow) to represent the impairment and establish a numeric target for the surrogate to represent attainment of water quality standards. (The TMDL regulations specify that TMDLs can be expressed in terms of mass per time, toxicity or other appropriate measure). Rather than representing a specific pollutant, the surrogate would represent the suite of pollutants contributing to the impairment. Examples of surrogates for use in stormwater TMDLs based on biological listings include the percent of impervious cover (IC) in the watershed of the impaired water and the flow volume in the impaired stream. The TMDL developed for Eagleville Brook, Connecticut, provides an example of a TMDL using IC as a surrogate and provides

information on how the target represents the impairment and how an appropriate target was established. The TMDL developed for Potash Brook, Vermont, illustrates the use of flow volume as a surrogate for stormwater-related impairments. The TMDL establishes a target for high flow in the brook on the basis of hydrologic conditions of two reference streams where aquatic life criteria are met.

In Practice: Using Impervious Cover as a Surrogate for Water Quality Standards in Eagleville Brook, Connecticut

Eagleville Brook does not meet water quality criteria and designated uses for aquatic life. The relevant criteria are based on distribution and abundance metrics for benthic invertebrates that inhabit lotic waters and are described in the state's narrative water quality standards. An SI analysis concluded that the biological impairments are most likely due to a combination of pollutants related to stormwater runoff from developed areas and other related stressors (such as the physical impacts of stormwater flows). Because the major source of stormwater is runoff from the impervious surfaces in the watershed, the Connecticut Department of Environmental Protection selected iIC as a surrogate to represent attainment of aquatic life criteria and to establish the loading capacity. The IC target is set at 12 percent IC. This threshold is based on Rapid Bioassessment Protocol data from 125 small (< 50 square mile) watersheds indicating that no stream monitoring location with more than 12 percent IC in its watershed met criteria for full support of aquatic life use.

The TMDL loading capacity of 12 percent was reduced 1 percent to provide for an MOS, yielding an overall allocation target of 11 percent. The TMDL applies the 11 percent IC target to all stormwater drainage areas and affects all sources subject to LAs and WLAs in the watershed. The percent IC TMDL and WLA/LA targets apply at all times (instantaneously, daily, monthly, seasonal, and annual). The final TMDL (2007) is at: www.ct.gov/dep/lib/dep/water/tmdl/tmdl_final/eaglevillefinal.pdf.

3.3. Identifying and Assessing Potential Sources

The step of identifying sources for TMDL development should be an extension of the data analyses conducted to understand the impairment and serves to further characterize the important sources and better define their location, behavior, magnitude, and influence. The source assessment should result in an understanding of what major sources are contributing to impairment and how (e.g., pollutants, delivery pathways). This can affect what approach is selected and how it is applied for TMDL development and helps to focus the allocation analysis as well as future implementation.

While the pollutant loads originating with each source are typically quantified during the linkage analysis (Chapter 4), the information necessary to understand their location and discharge behavior and characteristics is compiled and reviewed during this step. In general, the methods that are used to complete a source assessment do not differ between a TMDL addressing stormwater sources and any other TMDLs, and they involve identification and characterization of point sources (e.g., stormwater, wastewater treatment plants, industrial facilities) and nonpoint sources (e.g., grazing, timber harvest, septic systems). The methods for completing a source assessment vary with the type of watershed, pollutants, and sources but typically rely on information from state or national databases, literature reviews, and local knowledge from state or local contacts. It is important to correlate the assessment of both point and nonpoint sources with the data analysis to characterize source impacts and behavior. For example, land use, locations of stormwater outfalls or facility discharges, and other source information should be evaluated along with water quality data analyses (e.g., spatial analysis) to understand potential effects from the various sources or explore unknown sources. The following are examples of information typically reviewed to identify sources for TMDL development:

- Query EPA's NPDES databases to identify permitted facilities or sources discharging to the impaired water or its tributaries
- Coordinating with state permitting staff to identify the number, type, and location of NPDES permitted point sources in a watershed (including stormwater sources)
- Review geographic information system (GIS) coverages (e.g., land use, soils), satellite images, and aerial photos to identify potential nonpoint sources (e.g., agriculture, silviculture)
- Conduct field or *windshield* surveys of the watershed to identify potential nonpoint sources (e.g., livestock operations, illegal dumping, failing septic systems)
- Review previous watershed, local, or regional studies or reports to identify potential nonpoint sources

Identifying and understanding the effect of stormwater sources might require additional investigation or information to support TMDL development. This section discusses the information available to support the following activities to further define and characterize stormwater sources:

- Identify type and general location of stormwater sources
- Delineate drainage area for stormwater sources
- Characterize discharge from stormwater sources

Tip: Maximize resources when characterizing stormwater sources

A thorough characterization of stormwater sources can require a significant amount of time and resources. Therefore, it is important for TMDL and permit writers to work together to determine the significance of stormwater sources to the TMDL and, if it is determined that further characterization of stormwater sources is necessary, what type and amount of data are necessary to complete the characterization.

3.3.1. Identifying the Type and Location of Stormwater Sources

Stormwater sources will fall within one of three categories—MS4, construction or industrial—but there can be a number of sources or activities within those permitted areas that might contribute to an impairment. Common stormwater-related pollutants of concern that cause water quality impairment include pathogens, metals (other than mercury), sediment, nutrients, and chlorides. Table 4 illustrates the range of permitted stormwater sources and related activities typically associated with certain pollutants or impairments.

Table 4. Examples of sources within regulated stormwater areas associated with common pollutants and impairments

Pollutant/stressor of concern	Potential source(s) within permitted area		
	MS4	Construction	Industrial
Pathogens	▪ Sanitary sewer breaks and cross-connections ▪ Restaurant trash areas and mat washing ▪ Landfills and transfer stations ▪ Pet and wildlife waste		▪ Sanitary sewer breaks and cross-connections ▪ Food trash areas ▪ Landfills and transfer stations ▪ Improper disposal of sanitary waste (e.g., dumping from boats at marinas) ▪ Wildlife waste (sea gulls)
Metals	Vehicular emissions build up on impervious surfaces ▪ Roadways ▪ Driveways ▪ Parking lots	▪ Vehicle and equipment use on-site ▪ Materials storage/handling	Varies with industry type* ▪ Materials storage and handling ▪ Outdoor processing ▪ Legacy pollutants in soil

Pollutant/stressor of concern	Potential source(s) within permitted area		
	MS4	Construction	Industrial
	Industrial activities and materials storage ▪ NPDES permitted industrial facilities ▪ Corporation yards (i.e., municipal) ▪ Unpermitted industrial facilities		
	Commercial activities and materials storage ▪ Automotive repair facilities ▪ Gas stations ▪ Car washes ▪ Auto dealerships		

Sediment	▪ Active construction
	  ▪ NPDES permitted active construction
	  ▪ Non-permitted active construction (<1 acre)
	▪ Hillside development
	▪ Roads and highways
	▪ Snow/ice management
		▪ Erosion on-site causing off-site discharge
		▪ Road tracking
			▪ Debris from materials storage
			▪ Runoff from parking lots
			▪ Snow/ice management

Nutrients	▪ Residential fertilizer application ▪ Industrial/commercial fertilizer application ▪ Municipal fertilizer application ▪ Pet and wildlife waste		▪ Fertilizer application
Chlorides	▪ Snow/ice removal activities and storage		▪ Snow/ice management
Habitat Alteration	▪ New development in greenspaces ▪ Building roads and highways ▪ Development in sensitive areas (i.e., near waterways, on hillsides)	▪ Sediment discharge from site	
Flow Alteration	▪ Increased, unmitigated imperviousness due to new development or redevelopment ▪ Increased, unmitigated imperviousness due to new roads and highways ▪ Increased connection of existing imperviousness	▪ Change in drainage patterns due to removal of vegetation and changing grade	
Pesticides	▪ Residential pesticide application ▪ Industrial/commercial pesticide application ▪ Municipal pesticide application ▪ Fuel stations		
Oil and grease	▪ Vehicle leaks on parking lots and roadways ▪ Spills ▪ Illegal dumping	▪ Spills ▪ Equipment maintenance and fueling	Varies with industry type* ▪ Materials storage and handling ▪ Outdoor processing ▪ Legacy pollutants in soil
Toxic Organics			Varies with industry type* ▪ Materials storage and handling ▪ Outdoor processing ▪ Legacy pollutants in soil
PCBs	▪ Landfills		Varies with industry type* ▪ Materials storage and handling ▪ Outdoor processing ▪ Legacy pollutants in soil

* The federal Multi-Sector General Permit for Industrial Activities (MSGP 2000) covers 30 industrial sectors that fall into one or more of the 10 categories of stormwater discharges associated with industrial activity (and construction activities) described in 40 CFR 122.26(b)(14)(i)-(xi). The 30 sectors are defined by either the facility's Standard Industrial Classification (SIC) code or a general description of the facility's industrial activities. MSGP 2000 expired at midnight on October 30, 2005. A new permit has not been issued.

Compiling a list of all stormwater sources in the watershed of an impaired water should be, in theory, relatively easy because stormwater sources are covered under NPDES general and individual stormwater permits, and coverage under these permits is tracked by state and EPA NPDES permitting authorities.

Each state has a stormwater permit program coordinator or multiple coordinators that TMDL writers can contact for information. NPDES-authorized states issue NPDES permits for MS4s and stormwater discharges associated with construction and industrial activities. The amount of information available online varies from state to state, but generally, it is a good idea to speak with the permitting authority directly to assess the adequacy of online resources. TMDL writers should be aware that in many states stormwater permittees are tracked in different data systems than other NPDES permittees. For example, EPA's Permit Compliance System (PCS) and Integrated Compliance Information System (ICIS) data systems include permit information for a very small percentage of stormwater permittees regulated under the NPDES program.

Resources: For links to online resources for identifying permitted stormwater sources in your watershed, refer to the Resources list at the end of this chapter in Section 3.4.5. Resources include links to state and regional stormwater contacts and EPA's PCS/ICIS and eNOI systems.

In nonauthorized states, TMDL writers should contact the individual EPA Regional office for information about dischargers within a watershed boundary and use the Electronic Notice of Intent (eNOI) system EPA has developed to track construction sites and industrial facilities that need to apply for coverage under EPA's Construction General Permit (CGP) or Multi-Sector General Permit (MSGP). This system can be used to search, sort, and view NOIs and can be searched by city, county, or ZIP Code. The NOIs include location and receiving water name and for construction sites, the size of the disturbed area.

It is important to work with the permitting authority to identify stormwater sources in the watershed of an impaired water. Regulatory definitions of permitted stormwater sources can result in challenges in identifying the boundaries of regulated (i.e., permitted) stormwater sources versus and unregulated stormwater sources. This is particularly true for MS4s. Figure 10 illustrates the complexities of identifying regulated versus unregulated MS4s within a watershed boundary. As Figure 10 shows, it is possible to have both regulated and unregulated MS4s within the watershed boundary of an impaired waterbody. Phase I MS4s are defined as large and medium MS4s on the basis of population served, while Phase II regulated small MS4s are defined as small MS4s (i.e., any MS4 not regulated under Phase I) within an urbanized area. Any portion of a small MS4 within the urbanized area is considered a Phase II regulated small MS4 and is subject to Phase II MS4 permit requirements. Small MS4s outside the urbanized area are not subject to Phase II MS4 permit requirements; however, TMDL writers should take into account pollutant contributions from these stormwater discharges in a manner similar to regulated, small MS4s.

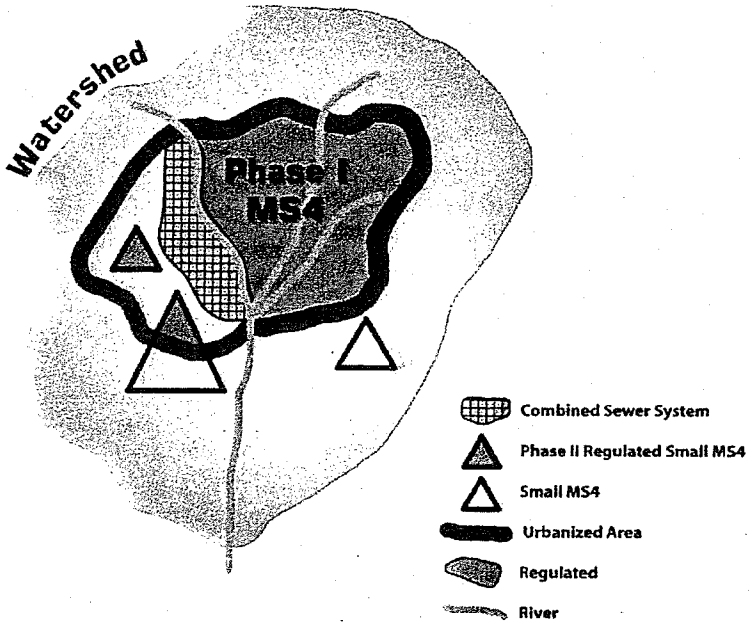


Figure 10. Potential spatial complexities of regulated and unregulated stormwater sources.

While land use is often an indicator for the existence of MS4s within the watershed of an impaired waterbody, it is important to remember that not all MS4s are municipal entities (e.g., cities, counties, or towns). Other entities such as departments of transportation, irrigation districts, sanitary districts, universities, hospitals, federal facilities and other entities that own and operate separate storm sewer systems can also fall into the category of regulated MS4s. These *nontraditional* MS4s have the potential to add another layer of MS4 boundaries for TMDL writers to consider. In addition, TMDL writers might focus on MS4s as the primary stormwater sources, but it is important to remember that regulated construction activities and industrial facilities both inside and outside the boundaries of regulated MS4s can also contribute stormwater discharges. Permit information on all types of regulated stormwater sources should be readily available in PCS. Identifying unregulated stormwater sources, such as other small MS4s, will require an understanding of local land uses and communication with the entities that own and operate these systems.

> ***Resources:*** For more information on obtaining land use and coverage information and conducting field reconnaissance and visual surveys, refer to the Resources list at the end of this chapter in Sections 3.4.6 and 3.4.7.

Field reconnaissance can also be used to identify any potential unknown stormwater sources as well as nonpoint sources. Field reconnaissance involves visiting the watershed and can range from a *windshield* survey while driving to a more comprehensive survey such as *walking the stream* to identify and geo-locate potential sources or identify potential monitoring sites to fill information gaps. Field reconnaissance is also useful to ground-truth available information used in characterizing the waterbody and its surrounding watershed, including areas within an MS4 boundary. For example, land use and land cover data are sometimes out of date and might include open space areas that have since been converted to residential, commercial, or industrial uses. Field reconnaissance is also helpful in identifying or better characterizing certain types of sources that might not be identifiable in the typical watershed coverages or information; for example,

field investigations are an essential tool for MS4 communities to detect illicit discharges and connections, which can be significant sources of contaminants. Field reconnaissance can also help identify areas where stormwater volumes and velocities are affecting stream morphology and contributing to impairment by noting streambank, channel and habitat conditions (e.g., embeddedness, number of pools and riffles).

3.3.2. Delineating the Drainage Areas of Stormwater Sources

To include a stormwater source in the TMDL analysis, it is necessary to identify its regulated area and if possible isolate the specific area drained by its sewer system and discharged to the receiving waterbody. Differences in spatial scale between the geographic focus of a TMDL (e.g., waterbody or watershed) and stormwater sources (e.g., regulated MS4s, construction sites, and industrial facilities) can create unexpected challenges for TMDL writers at this stage of TMDL development. To identify stormwater source areas, it is important that the TMDL writers fully understand the types of sources and how they are regulated. For example, it might be assumed that identifying jurisdictional boundaries is a straightforward way to identify regulated MS4s. However, the jurisdictional boundary is not necessarily the same as the regulated MS4 boundary. For example, combined sewer system portions of storm sewer infrastructure are not regulated by the NPDES MS4 program. As another example, regulated small MS4s typically are only the portion of the MS4 system that is actually within the urbanized area boundary (Figure 10). These distinctions can affect how the stormwater sources are included in the analysis and how their respective WLAs are subsequently developed and assigned.

It is also important to understand the stormwater conveyance methods for each stormwater source in a watershed to determine whether the source is discharging to or affecting the impaired waterbody and to delineate the boundary and drainage area. Stormwater can be conveyed to a waterbody through direct surface flow or through a pipe, ditch, or other conveyance. In addition, stormwater might be recharged to groundwater, which might or might not affect a stream. The type and location of these conveyance methods will help a TMDL writer to assess the potential effects that a stormwater source is having on a stream. For example, a concrete-lined channel that discharges stormwater directly to a receiving stream will likely have a greater effect than a discharge from a well-maintained wet pond designed to capture and treat 80 percent of the received water quality volume. Because of these issues, the outfall location and conveyance method for each stormwater source should be documented and summarized before completing a TMDL. This could be as simple as plotting the outfall locations in a GIS and comparing those locations to observed in-stream impacts, or it might require a more comprehensive analysis.

TMDL writers should work with the permitting authority to identify the information available to delineate the areas and drainage boundaries for stormwater sources. Individual NPDES permit application requirements for Phase I MS4s [40 CFR 122.26(d)(1)(iii)(B)] include the submittal of a map showing the service boundaries of the MS4 covered by the application as well as the location of all outfalls that discharge into a water of the United States. Phase II MS4s applying for individual permit coverage are required to submit the same information. Phase II MS4s regulated under general permits submit NOIs that might have a map, a description of the regulated MS4 boundary, or both and should be available from the permitting authority. However, those MS4s are required to develop such maps as part as permit implementation, not at the time of application. Industrial and construction SWPPPs should include site descriptions or maps to identify the facility or site location and locations of outfalls or surface water discharges.

If this information is not readily available or not sufficient to determine the area draining a stormwater source, a TMDL writer should work with the permitting authority to determine if additional information is necessary to locate and delineate all the stormwater sources in the watershed of the impaired waterbody. City and county planning departments often have information on the location and extent of stormwater infrastructure and controls, and in some cases, detailed sewer and boundary maps or stormwater facility plans might be available. This information should be obtained, where available, because it is often the most detailed and accurate information about stormwater sources. Similarly, industrial facilities and construction sites will have, and might submit to the city, county, or permitting authority, plans that document stormwater sources and management practices. Stormwater facilities are often required to submit a facility plan that documents the characteristics of the facility. However, additional investigations might still be needed to locate all potential stormwater sources.

3.3.3. Characterizing Discharges from Stormwater Sources

To better understand the quality and quantity of discharge being delivered to an impaired waterbody from a stormwater source, it is useful to evaluate data and information generated by the source to satisfy permit requirements. Table 5 outlines the types of data and information generated by the three types of stormwater sources—MS4s, industrial facilities, and construction activities—and the following sections briefly describe the information.

Table 5. Data and information generated by stormwater sources through the permitting process

Stormwater permit document or activity	Specific type of data generated by permittee
MS4 discharger generated data	
Phase I MS4 permit application	▪ Description of land use and 10-year growth projections ▪ Outfall characterization sampling data ▪ Receiving waters
Phase II MS4 general permit NOI	▪ MS4 location and boundaries ▪ Receiving waters
Industrial facility inventory and inspections (Phase I MS4s)	▪ Location of industrial facility to determine the watershed ▪ Activities, materials, and physical features of the industrial facility that might be sources of pollutants of concern during dry or wet weather ▪ Prioritization based on location, pollutants of concern, etc. ▪ Compliance history of industrial facility ▪ Location and pollutants of concern from nonregulated industrial (and perhaps commercial) facilities
Construction activities inventory and inspections	▪ Location of construction activity ▪ Size of disturbed area ▪ Receiving water/watershed ▪ Prioritization based on size, location, compliance history, etc. ▪ Compliance history of project ▪ Number and location of nonregulated (less than one acre) construction projects
IDDE and tracking	▪ Outfall map with receiving waters ▪ Dry weather screening ▪ Tracking of citizen complaints, dumping, spills, restaurant inspections, etc.
Post-construction BMP implementation and tracking	▪ Types of BMPs required ▪ Locations of BMPs ▪ Operation and maintenance (O&M) records/agreements ▪ Inspection results

Stormwater permit document or activity	Specific type of data generated by permittee
Outfall and ambient water quality monitoring data	▪ Characterization of discharges from particular land use types, subwatersheds, etc. ▪ Ambient data could provide baseline information before installing BMPs ▪ Habitat assessments might be part of monitoring program
Annual reports	▪ Location and type of identified illicit discharges ▪ Location of approved erosion and sediment control plans ▪ Compiled post-construction BMP inspection results ▪ Compiled monitoring results ▪ Planned SWMP changes
Industrial discharger generated data	
Industrial individual permit application	▪ Location of outfalls ▪ Site drainage map ▪ Impervious area calculation ▪ Description of proposed activities, spills and leaks, on-site materials ▪ Sampling data (if available)
Industrial general permit NOI	▪ Location of facility ▪ Receiving water/MS4 ▪ Applicable industrial sector
Industrial SWPPP	▪ Location of industrial facility to determine the receiving water(s) and if the facility is within an MS4 boundary ▪ Activities, materials, and physical features of the industrial facility that might be sources of pollutants of concern during dry or wet weather ▪ Map that shows outfalls into receiving waters
Monitoring data	▪ Loading from facility for benchmark discharge monitoring parameters
Industrial compliance evaluations and inspections	▪ Assess any compliance or BMP implementation issues on-site which may contribute to loading
Industrial sampling data	▪ Loading from particular facilities ▪ Assess general loading from types of industrial facilities ▪ Assess industrial loading from an MS4
Construction project generated data	
Construction individual permit application	▪ Location of construction activity ▪ Total area and total disturbed area ▪ Proposed BMPs ▪ Runoff coefficient ▪ Imperviousness created ▪ Receiving water
CGP NOI	▪ Location of construction activity ▪ Start/end dates ▪ Total disturbed area ▪ Receiving water
Construction activity SWPPP	▪ Location and size of disturbance as well as a location with associated surface water discharges. ▪ A description of any discharge associated with industrial activity other than construction and the location of that activity on the construction site. ▪ Type and location of any post-construction BMPs to be implemented on-site
Monitoring data	▪ Loading from project

The list of data types in Table 5 is based on the minimum federal permit requirements and assumed implementation strategies. Permitting authorities can choose to develop more stringent permit requirements; therefore, TMDL writers might want to take some time to carefully review individual and general permits issued by state permitting authorities to identify state or regional specific data and

information requirements. If a TMDL writer identifies potentially useful data generated by stormwater sources, the TMDL writer can work through the permitting authority to obtain this information. The permitting authority will have some information readily available on file (e.g., applications, NOIs, annual reports) or can make official requests to permittees for other types of information that the permitting authority might not have on file. It is important for TMDL writers to coordinate with permitting authorities to obtain this information, rather than directly contacting stormwater sources without the permitting authority's knowledge. This will ensure efficient use of time and resources and maintain clear communication with stormwater sources.

3.3.3.1. MS4-Generated Data

Both individual and general MS4 permits require Phase I and Phase II MS4s to develop specific types of documents that contain information and data potentially useful to the TMDL development process. Figure 11 illustrates the type of documents that MS4s must develop to comply with either individual permit requirements or general permit requirements. Under individual permits, Phase I MS4s must complete a two-part application, develop an SWPPP, conduct monitoring, and generate an annual report that compiles information and data on from SWPPP implementation from the previous year. As shown in Figure 11, Phase II MS4s have the option of obtaining permit coverage under either an individual permit or a general permit, depending on which type of permit the permitting authority makes available. Under an individual permit, a Phase II MS4 would likely have the same requirements to generate an SWPPP and prepare annual reports as a Phase I MS4. Although Phase II MS4s covered under a general permit must prepare the same type of documents, the information required in each document might vary. For example, the permit application for a general permit, the NOI, does not have the same extensive information requirements as the two-part application for an individual permit. In addition, not all general permits require monitoring. The Phase II MS4 general permit does require development of an SWPPP and annual reports, although the content might vary from those developed under an individual permit.

> ***Tip: Understanding the potential types of data not required by permits***
>
> Municipal MS4s might have data valuable to the TMDL development process that is not required by NPDES permits. For example, comprehensive planning or zoning documents could provide information regarding land use distribution. In addition, municipalities might coordinate or support volunteering monitoring or *watch* groups that could provide valuable input (e.g., stream monitoring, cleanups).

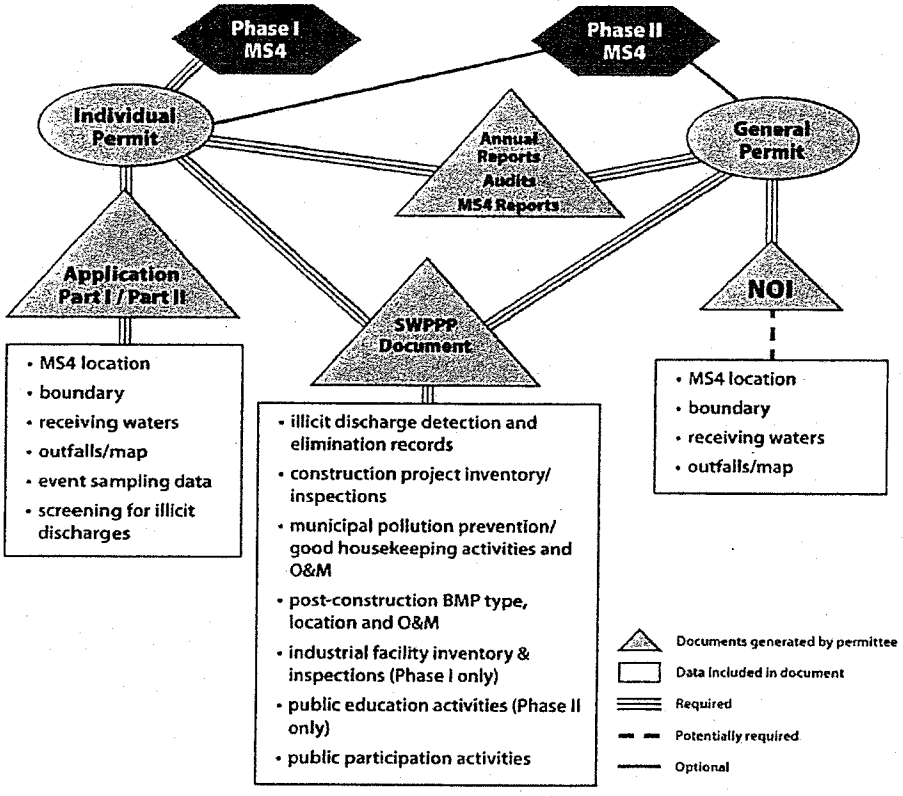


Figure 11. Required MS4 permit documents and associated information and data.

3.3.3.2. Industrial Discharger Generated Data

Most stormwater discharges associated with industrial activity have permit coverage under an NPDES general permit rather than an individual permit. However, significant industrial dischargers might have stormwater discharges covered under the facility's overall NPDES permit, which covers process wastewater, non-process wastewater, and stormwater. Figure 12 shows the type of documents required under both individual and general permits for industrial facilities.

Where an EPA Region is the permitting authority, rather than the state, regulated industrial facilities obtain permit coverage under EPA's MSGP. State permitting authorities often use EPA's MSGP as a template for developing and issuing their state-specific industrial stormwater general permit, with modifications necessary to address state-specific issues. All industrial stormwater general permits require industrial facilities to submit NOIs, and most require these permittees to develop and implement SWPPPs and conduct comprehensive site compliance evaluations and periodic inspections. Also, most of these industrial stormwater general permits require at least some sectors to conduct analytical monitoring of stormwater runoff. Figure 12 illustrates the types of data and information generated by an industrial discharger as a result of complying with permit requirements. This information can assist TMDL writers in characterizing stormwater discharges from industrial stormwater sources during the TMDL development process. .

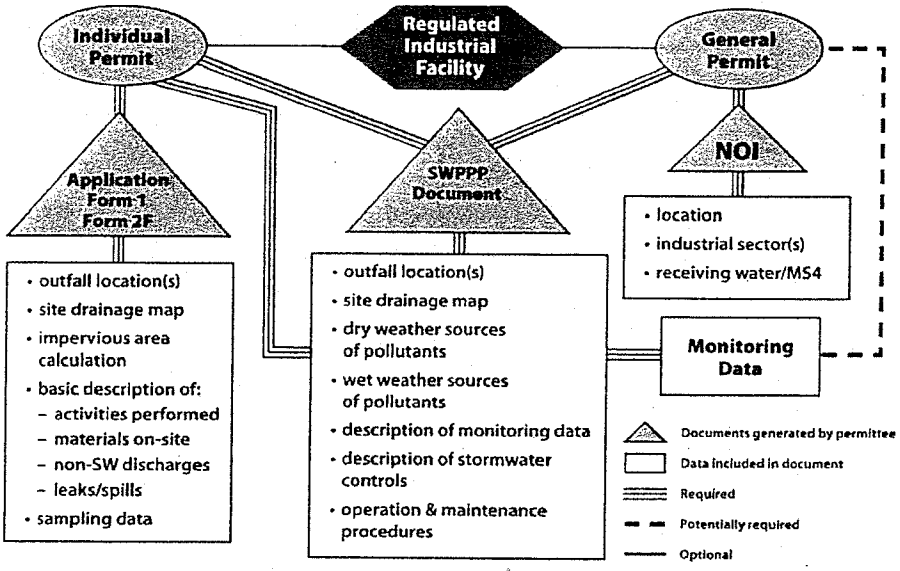


Figure 12. Required industrial stormwater permit documents and associated information and data.

3.3.3.3. Construction Project Generated Data

Construction projects disturbing one acre or more are required to obtain NPDES permit coverage for stormwater discharges. Figure 13 illustrates the data generated by construction stormwater sources as a result of complying with individual and general construction permit requirements. Construction stormwater discharges are most often permitted under an NPDES CGP, issued either by the state permitting authority or by an EPA Regional office. To obtain general permit coverage, the construction site operator must complete the required NOI and provide information such as project location and receiving waters. Construction stormwater general permits require operators of construction projects to develop and implement SWPPPs and conduct routine self-inspections. SWPPPs contain the majority of site-specific documentation of stormwater management activities performed. In limited instances, the state or EPA permitting authority may require certain construction projects (e.g., due to impaired receiving waters or to protect high-quality streams) to obtain coverage under an individual permit. When required, individual permits for construction activity typically contain requirements similar to those found in general permits; however, it is likely that the permittee will have specific monitoring requirements. Some construction stormwater permits (i.e., both individual and general) include effluent limits or *action levels* and associated effluent or receiving stream monitoring.

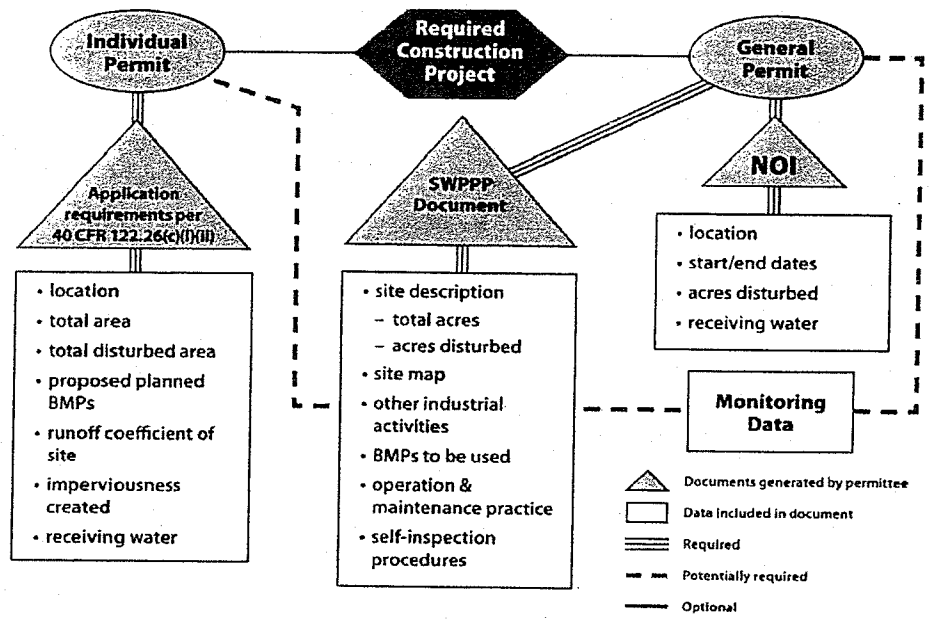


Figure 13. Required construction stormwater permit documents and associated information and data.

3.4. Resources

3.4.1. Stormwater Effects on Receiving Waters

1. USEPA (U.S. Environmental Protection Agency). 1983. *Results of the Nationwide Urban Runoff Program – Volume I Final Report.* U.S. Environmental Protection Agency, Water Planning Division, Washington, DC. www.epa.gov/npdes/pubs/sw_nurp_vol_1_finalreport.pdf

   The 5-year Nationwide Urban Runoff Program (NURP) was designed to examine the quality of urban runoff at different urban locations; whether urban runoff is a significant contributor to water quality problems in the United States; and the performance, effectiveness, and utility of management practices for controlling pollutant loads from urban runoff. This report presents the findings of the program.

2. USEPA. Undated. *Urbanization and Streams: Studies of Hydrologic Impacts.* U.S. Environmental Protection Agency, Office of Wetlands, Oceans and Watersheds, Washington, DC. http://epa.gov/owow/nps/urbanize/report.html. Accessed July 2008.

   This Web-based report summarizes the findings of a literature search to document physical impacts and indications of water quality problems associated with stormwater runoff. The report summarizes the review documents, articles and reports, and provides citations for further information.

3. Burton, Allen, and Robert Pitt. 2001. *Stormwater Effects Handbook: A Toolbox for Watershed Managers, Scientists, and Engineers*. Lewis Publishers, Boca Raton, Florida. www.epa.gov/ednnrmrl/publications/books/handbook/index.htm

   This handbook is intended to be a working document that assists scientists, engineers, consultants, regulators, citizen groups, and environmental managers in determining if stormwater runoff is causing adverse effects and beneficial use impairments in local receiving waters. The handbook provides an extensive discussion of the effects of stormwater (based on information documented in a number of other studies and documents) and focuses on providing information to support the design of a sampling program to assess stormwater impacts.

4. Center for Watershed Protection. 2003. *Impacts of Impervious Cover on Aquatic Systems*. Center for Watershed Protection, Ellicott City, MD. www.cwp.org/Store/guidance.htm

   This report examines more than 225 multidisciplinary studies documenting the hydrological, physical, water quality, and biological effects of urbanization and its accompanying IC.

5. Center for Watershed Protection's Stormwater Manager's Resource Center Web site: www.stormwatercenter.net/

3.4.2. Understanding Flow in TMDL Development

1. USEPA (U.S. Environmental Protection Agency). 2007. *An Approach for Using Load Duration Curves in the Development of TMDLs*. EPA 841-B-07-006. U.S. Environmental Protection Agency, Office of Water, Office of Wetlands, Oceans, and Watersheds, Washington, DC. www.epa.gov/OWOW/tmdl/duration_curve_guide_aug2007.pdf

   This document provides an overview on the use of duration curves for TMDLs, describing the basic steps needed to develop duration curves and subsequently identify loading capacities, LAs, WLAs, MOS, and seasonal variations. The guide also discusses some considerations and limitations in using the approach and includes several case examples.

2. USEPA (U.S. Environmental Protection Agency). 1999. *Protocol for Developing Sediment TMDLs*. EPA 841-B-99-004. U.S. Environmental Protection Agency, Office of Water, Washington, DC. www.epa.gov/owow/tmdl/sediment/pdf/sediment.pdf

   This technical guidance document provides information to support TMDL writers in developing TMDLs for sediment. The document includes information on how to complete each step of the TMDL process, including problem identification, source assessment, linkage of water quality targets and sources, allocation analysis, and monitoring.

3. USEPA. 2005. *TMDL Model Evaluation and Research Needs*. EPA/600/R-05/149. U.S. Environmental Protection Agency, Office of Research and Development, National Risk Management Research Laboratory, Cincinnati, OH. www.epa.gov/nrmrl/pubs/600r05149/600r05149.htm

   This report documents the review of more than 60 available watershed and receiving water models for their applicability to TMDL development and implementation. It discusses model selection on the basis of model capabilities and provides a series of tables rating the capabilities

or applicability the models using the categories of TMDL endpoints, general land and water features, special land processes, special water processes, and application considerations. The document also provides individual fact sheets for each reviewed model.

4. USEPA (U.S. Environmental Protection Agency). 2008. *Incorporating Green Infrastructure Concepts into Total Maximum Daily Loads.* U.S. Environmental Protection Agency, Washington, DC. www.epa.gov/owow/tmdl/stormwater/

   This 11 page fact sheet provides recommendations for incorporating GI and LID concepts into various elements of a TMDL and provides two TMDL case studies.

3.4.3. Chemical, Physical and Biological Data

1. EPA's Storage and Retrieval Database (STORET): www.epa.gov/storet/
2. USGS's National Water Information System Web site (NWISWeb): http://waterdata.usgs.gov/nwis
3. EPA's Environmental Monitoring and Assessment Program (EMAP) database: www.epa.gov/emap/index.html
4. USGS's National Water-Quality Assessment (NAWQA) Program: http://water.usgs.gov/nawqa/
5. USDA's PACFISH/INFISH Biological Opinion Program: http://fsgeodata.fs.fed.us/pibo/

3.4.4. Biological Assessment and Guidance

1. EPA's Biocriteria Web site: www.epa.gov/waterscience/biocriteria/
2. USEPA (U.S. Environmental Protection Agency). 2000. *Stressor Identification Guidance Document.* EPA 822-B-00-025. U.S. Environmental Protection Agency, Office of Water and Office of Research and Development, Washington, DC. www.epa.gov/waterscience/biocriteria/stressors/

   This document describes EPA's process for identifying any type of stressor or combination of stressors that cause biological impairment. The SI Guidance is intended to lead water resource managers through a formal and rigorous process that identifies stressors causing biological impairment in aquatic ecosystems and provides a structure for organizing the scientific evidence supporting the conclusions.

3. EPA's CADDIS Web site: http://cfpub.epa.gov/caddis/

   The Causal Analysis/Diagnosis Decision Information System (CADDIS) is an online application based on the process developed in EPA's SI Guidance Document. It uses a step-by-step guide, worksheets, and examples to help scientists and engineers find, access, organize, share, and use environmental information to evaluate causes of biological effects observed in aquatic systems such as streams, lakes, and estuaries.

4. EPA's list of bioassessment publications from EPA and other federal agencies (e.g., U.S. Geological Survey [USGS], U.S. Department of Agriculture [USDA]): www.epa.gov/bioindicators/html/publications.html

3.4.5. Permitted Stormwater Sources in a Watershed

1. EPA's list of state stormwater contacts: http://cfpub.epa.gov/npdes/contacts.cfm?program_id=6&type=STATE
2. EPA's list of Regional stormwater contacts: http://cfpub.epa.gov/npdes/contacts.cfm?program_id=6&type=REGION
3. EPA's PCS: www.epa.gov/enviro/html/pcs/index.html
4. EPA's eNOI system: http://cfpub.epa.gov/npdes/stormwater/enoi.cfm
5. Authorization Status for EPA's Stormwater Construction and Industrial Programs by State: http://cfpub.epa.gov/npdes/stormwater/authorizationstatus.cfm
6. USEPA (U.S. Environmental Protection Ageny). 2007. *MS4 Program Evaluation Guidance*. EPA-833-R-07-003. U.S. Environmental Protection Ageny, Office of Wastewater Management, Water Permits Division, Washington, DC. http://cfpub.epa.gov/npdes/docs.cfm?program_id=6&view=allprog&sort=name#ms4_guidance

   The MS4 Evaluation Guide is primarily for use by NPDES authorities to evaluate the quality of Phase I and Phase II MS4 programs, for permit compliance, technical assistance, and other purposes. It can be used for comprehensive program evaluations or for certain components. MS4 program managers can also use it to evaluate their own programs.

3.4.6. Land Use and Impervious Surface Coverages

1. Multi-Resolution Land Characteristics (MRLC) Consortium's National Land Cover Database (NLCD): www.epa.gov/mrlc/
2. National Agriculture Imagery Program (NAIP) Aerial Photos: http://165.221.201.14/NAIP.html
3. USGS's Earth Explorer: http://edcsns17.cr.usgs.gov/EarthExplorer/
4. USGS's Land Cover Institute: http://landcover.usgs.gov/
5. Google Earth: http://earth.google.com/

3.4.7. Field Reconnaisance and Illicit Discharge Detection

1. Kitchell, A., and T. Schueler. 2005. *Unified Stream Assessment: A User's Manual*. Version 2.0. Center for Watershed Protection, Ellicott City, MD. www.cwp.org/Store/usrm.htm#10

   This document outlines how to perform a Unified Stream Assessment, a rapid technique to locate and evaluate problems and restoration opportunities within the urban stream corridor. It also describes how to interpret the data collected to determine the stream corridor restoration potential.

2. Wright, T., C. Swann, K. Cappiella, and T. Schueler. 2005. *Unified Subwatershed and Site Reconnaissance: A User's Manual.* Version 2.0. Ellicott City, MD. www.cwp.org/Store/usrm.htm#11

   The manual provides detailed guidance on how to perform each of its four components: the Neighborhood Source Assessment, Hotspot Site Investigation, Pervious Area Assessment, and the analysis of Streets and Storm Drains. Together, these rapid surveys help identify upland restoration projects and source control to consider when devising subwatershed restoration plans.

3. Brown, E., D. Caraco, and R. Pitt. 2004. *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments.* Prepared for the U.S. Environmental Protection Agency, Office of Water and Wastewater, Water Permits Division, Washington, DC, by Center for Watershed Protection and the University of Alabama. www.epa.gov/npdes/pubs/idde_manualwithappendices.pdf

   Chapter 7 of this document describes the use of watershed reconnaissance to search for illicit discharge problems in the field, with the process consisting of rapid screening of priority outfalls in priority subwatersheds followed by indicator monitoring at suspect outfalls to characterize flow types and trace sources.

Chapter Four
Developing TMDLs with Stormwater Sources

What's included in this chapter

- ✓ Discussion of considerations for selecting an approach for developing TMDLs with stormwater sources.
- ✓ Description of common analytical approaches that can be used for developing stormwater source TMDLs.
- ✓ Identification of factors that affect how stormwater sources are addressed in the TMDL analysis.
- ✓ Discussion of and examples illustrating options for calculating and expressing stormwater WLAs.

What you should know after reading this chapter

- ✓ The unique considerations for incorporating stormwater sources and calculating associated WLAs in a variety of commonly used TMDL development approaches.
- ✓ The advantages and disadvantages of different methods for developing stormwater-source TMDLs.
- ✓ Options for developing stormwater WLAs.

Potential roles and responsibilities under this activity

If you are a TMDL writer

1. Evaluate the potential approaches for developing your stormwater-source TMDL based on your technical and programmatic needs.
2. Select an approach for developing your stormwater-source TMDL.
3. Decide how to represent and include stormwater sources in your TMDL analysis.
4. Calculate WLAs for stormwater sources that will facilitate effective permit development.

If you are a stormwater permit writer

1. Coordinate with TMDL writer to support accurate and appropriate representation of stormwater sources in the TMDL analysis.
2. Provide input on WLA analysis to support development of equitable and feasible WLAs.

4. DEVELOPING TMDLS WITH STORMWATER SOURCES

The TMDL analysis establishes a quantitative link between pollutant sources and receiving water response to identify the loading capacity of an impaired waterbody that will result in meeting water quality standards. There are a number of approaches to support this analysis and selecting which to use for any given TMDL is often guided by a number of technical and practical factors. Developing stormwater-source TMDLs can present some unique technical considerations that affect what approaches can be used and how they are applied. As shown in Figure 4, this chapter discusses the activities related to calculating the TMDL and its associated allocations. To address these activities as related to stormwater-source TMDLs, the chapter first introduces a number of approaches for developing stormwater-source TMDLs and then discusses the following:

- Selecting an approach for developing the stormwater-source TMDL
- Applying that approach to develop the TMDL
- Expressing stormwater WLAs

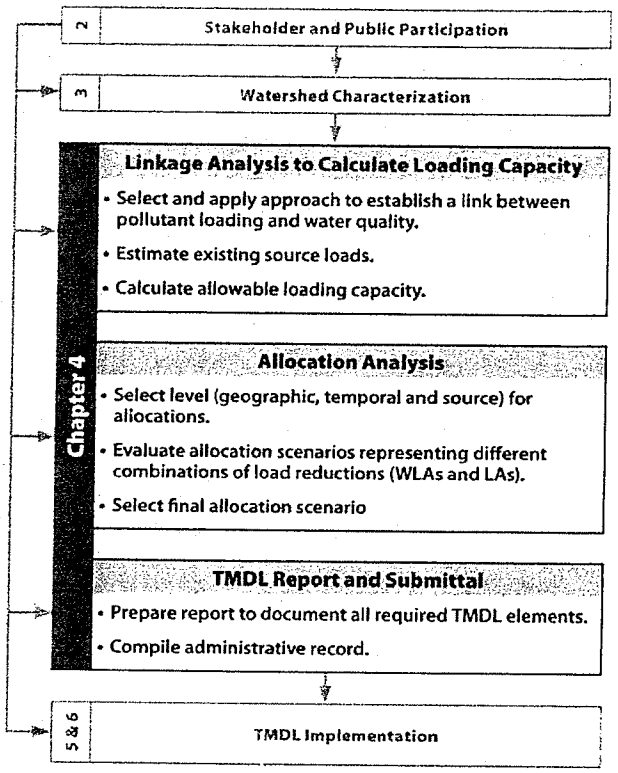


Figure 14. Illustration of the steps in the TMDL process, including activities related to calculation and documentation of the TMDL and its allocations.

4.1. Overview of Approaches for Developing TMDLs

There are a handful of approaches that are commonly used for developing TMDLs. This section briefly introduces these approaches, and Sections 4.2 and 4.3 describe the considerations for their selection and application when dealing with stormwater sources.

The types of TMDL approaches discussed fall into to two major categories—modeling approaches and non-modeling approaches. The term *model* describes the set of equations or algorithms that are used to simulate a physical system. In this report, model refers to the available software tools that automate the calculation of equations or groups of equations representing the system. These can include watershed models that simulate the processes related to surface runoff and receiving water models that simulate a range of waterbody conditions and processes. *Non-modeling* approaches include those approaches that are not based on a standardized, automated software that simulates watershed or waterbody processes. They

> ***Resources:*** For more information the general approach for calculating TMDLs, refer to the Resources list at the end of this chapter in Section 4.5.1.

include those approaches that are based on monitoring data, empirical equations or other statistical or site-specific calculations. Examples include load duration curves developed using observed flow and water quality data and simple mass-balance calculations.

Within those categories, there are various types of approaches, all of which can be further characterized according to the type of simulation or calculation they perform. The approaches either calculate land-based loads or the resulting waterbody loads. Table 6 presents the types of approaches discussed in this section and their respective categories of modeling vs. non-modeling and land-based vs. waterbody-based. The *land-based* approaches calculate loading from land-based runoff processes assuming some measure of precipitation and characteristics representative of the watershed (e.g., soils, imperviousness). The *waterbody-based* approaches calculate the *delivered* load in the waterbody on the basis of in-stream conditions, either using observed monitoring data (i.e., concentration and flow) or assuming some user-defined load inputs and outputs. Many of these approaches are applied in combination to represent both source loading and waterbody response to establish a loading capacity and associated WLAs and LAs to meet water quality standards.

Table 6. Commonly used TMDL approaches

Calculation process	Type of TMDL approach	
	Modeling	Non-modeling
Land-based	▪ Watershed models (simple to complex)	▪ Export coefficients ▪ IC method ▪ Simple Method
Waterbody-based	▪ Receiving water models (simple to complex, hydrodynamic and water quality)	▪ Load duration method ▪ Percent reduction method ▪ Mass balance or steady-state analysis

The following discussion provides a brief description of these common TMDL approaches. More detail on their application in stormwater-source TMDLs is then provided, with examples, in Section 4.3.

4.1.1. Land-based Approaches

The following are brief descriptions of several land-based approaches used for TMDL development:

- **Watershed Model.** Many TMDLs use watershed models to evaluate existing and allowable pollutant loads to identify allocations, load reductions, and management scenarios. This group of models emphasizes description of watershed hydrology and water quality, including runoff, erosion, and washoff of sediment and pollutants. Some models simulate only the land-based processes, while some can also include linked river segments and simulate in-stream transport and water quality processes. Watershed models vary in the level of detail, including what processes they simulate and the simulation timestep (e.g., daily vs. monthly). The complexity of watershed models can range from the use of loading functions—empirically based estimates of load based on generalized meteorologic factors (e.g., precipitation, temperature)—to physically based simulations—scientifically based equations to represent the physical, chemical, and biological processes associated with runoff, pollutant accumulation and washoff, and sediment detachment and transport. An example of a loading function model is Generalized Watershed Loading Functions (GWLF), which simulates basic watershed processes related to weather, erosion, and runoff and pollutant washoff and does not include waterbody response or in-stream fate and transport. GWLF provides watershed load and flow estimates on a monthly basis. Alternatively, Hydrologic Simulation

Program – Fortran (HSPF) combines watershed processes with in-stream fate and transport to simulate watershed hydrology, land and soil contaminant runoff, and sediment-chemical interactions. HSPF can generate time series results of any of the simulated processes on a daily or even sub-daily timestep.

- **Export Coefficients/Pollutant Budgets.** This category encompasses a number of approaches built on empirical relationships among watershed processes and pollutant loading as well as the use of literature values of typical watershed loading rates. Examples include using monthly load rates from various land uses to calculate allowable loading from an impaired watershed. Another example is using an empirical relationship that allows a user to calculate an allowable load depending on desirable conditions (e.g., target runoff/waterbody concentration or indicator levels). This approach would typically be used to calculate existing loads and would often be combined with a supplementary approach that calculates an allowable load on the basis of in-stream targets (e.g., percent reduction). Another approach that could fall within this category is a Vollenweider type approach where an empirical equation relating reservoir tropic status to allowable phosphorus loading is used to identify an allowable load corresponding to the desired reservoir condition.
- **IC Method.** This emerging method calculates a target of percent IC in a watershed to represent attainment of water quality standards. Available data are used to relate the percent IC with the resulting runoff, pollutant loading, and waterbody response to calculate the loading capacpity.
- **Simple Method.** The Simple Method is an empirical equation used to calculate pollutant loading on the basis of drainage area, pollutant concentrations, a runoff coefficient, and precipitation. In the Simple Method, the amount of rainfall runoff is assumed to be a function of the imperviousness of the contributing drainage area. When using the Simple Method, the TMDL loading capacity would typically be calculated using a combination approach with a waterbody-based approach such as the percent reduction method.

4.1.2. Waterbody-based Approaches

The following are brief descriptions of several waterbody-based approaches used for TMDL development:

- **Receiving Water Model.** Receiving water models simulate conditions within a receiving waterbody (e.g., lake, stream, estuary) on the basis of a representation of physical, chemical and biological processes. Inputs to the waterbody are often defined as user-defined boundary conditions or using linked dynamic output from a watershed model. Receiving water models are typically either steady-state or dynamic models. Steady-state models operate under a single, nonvariable flow condition with constant inputs, typically used to evaluate conditions for a design or critical flow. Dynamic models allow for variations in both flow and meteorologic conditions on a small timestep, typically shorter than daily. Level of complexity in receiving water models is also determined by spatial detail described as one, two, or three dimensions.
- **Load Duration.** The load duration methodology relies on using observed flows and water quality criteria to establish a curve of loading capacities for various flow conditions. This builds on using flow duration curves, which use hydrologic data from stream gages to evaluate the cumulative frequency of historic flow data over a specified period. A water quality criterion or other target concentration can then be multiplied by the observed flows to create a curve representing the distribution of allowable loads as a function of daily flow, representing the loading capacity of the stream. The entire curve can be used to represent flow-variable loading capacities, or allowable loads

can be identified for specified flow intervals, which can be used as a general indicator of hydrologic condition (e.g., wet versus dry).

- **Percent Reduction.** This method assumes a 1:1 relationship between surface water concentrations and pollutant loading. The existing pollutant concentrations are compared to applicable water quality criteria to calculate a necessary reduction. This reduction is then applied to an estimate of *existing* loading to calculate the loading capacity to meet water quality standards. Existing loads are often calculated using ambient monitoring data (e.g., concentration and flow) or some estimation of land-based loading (e.g., export coefficients).
- **Mass Balance or Steady-State.** These approaches rely on the assumption of conservation of mass into a waterbody. The analysis might calculate loads entering a waterbody using export coefficients or observed data and calculate the resulting waterbody concentrations on the basis of estimated losses (e.g., settling, decay) and inputs. The approach relies on identifying the necessary loads entering a waterbody that will meet the desired waterbody target after considering all inputs and losses. These approaches can be applied for a steady-state critical condition or longer time periods, such as average monthly loading rates.

4.2. Selecting an Approach for Developing Stormwater-Source TMDLs

TMDL writers often consider a number of factors when deciding which approach to use to calculate the loading capacity and associated LAs and WLAs for TMDLs. As shown in Figure 15, these can include user needs or requirements, programmatic considerations, and technical needs. While user needs and programmatic considerations often guide the general type of approach (e.g., simple vs. complex, modeling vs. non-modeling), the technical considerations often guide the selection of a specific approach or methodology. The technical considerations define the following needs for the TMDL analysis:

- Spatial scale/resolution
- Temporal resolution/time scale
- Processes or features that need to be included (e.g., pollutant type, surface runoff, in-stream transport)

The watershed characterization step of TMDL development (Chapter 3) should generate the necessary information to define these needs by providing an understanding of the impaired waterbodies, the surrounding watershed and the associated impairments. Specifically, the major considerations or questions that were addressed during the watershed characterization that can support selection of an appropriate approach for TMDL development include the following:

- What are the applicable water quality criteria?
- What are the sources?

Tip: Evaluating Stormwater Issues when Selecting a TMDL Approach

Stormwater-source TMDLs can present unique considerations affecting selection and application of a TMDL approach. TMDL writers should evaluate stormwater-specific considerations within the context of *all* the issues and characteristics of the TMDL, waterbody, and associated watershed. If stormwater is a significant source affecting water quality, these considerations might carry more weight in the decision-making process; however, they should be evaluated with all watershed-specific issues when selecting the most appropriate approach.

- What are the impairments and associated critical conditions?

Table 7 summarizes the considerations related to each of the three technical needs for these defining topics of water quality standards, impairment, and sources. The answers to the questions outlined in Figure 15 and more specifically in Table 7 will guide approach selection for TMDL development. While these questions and considerations will not be much different for a stormwater-source TMDL than for any other TMDL, there might be some unique issues related to stormwater that will affect the selection of an appropriate approach for TMDL development. The following section discusses these stormwater-specific issues to be considered when selecting an approach for TMDL development.

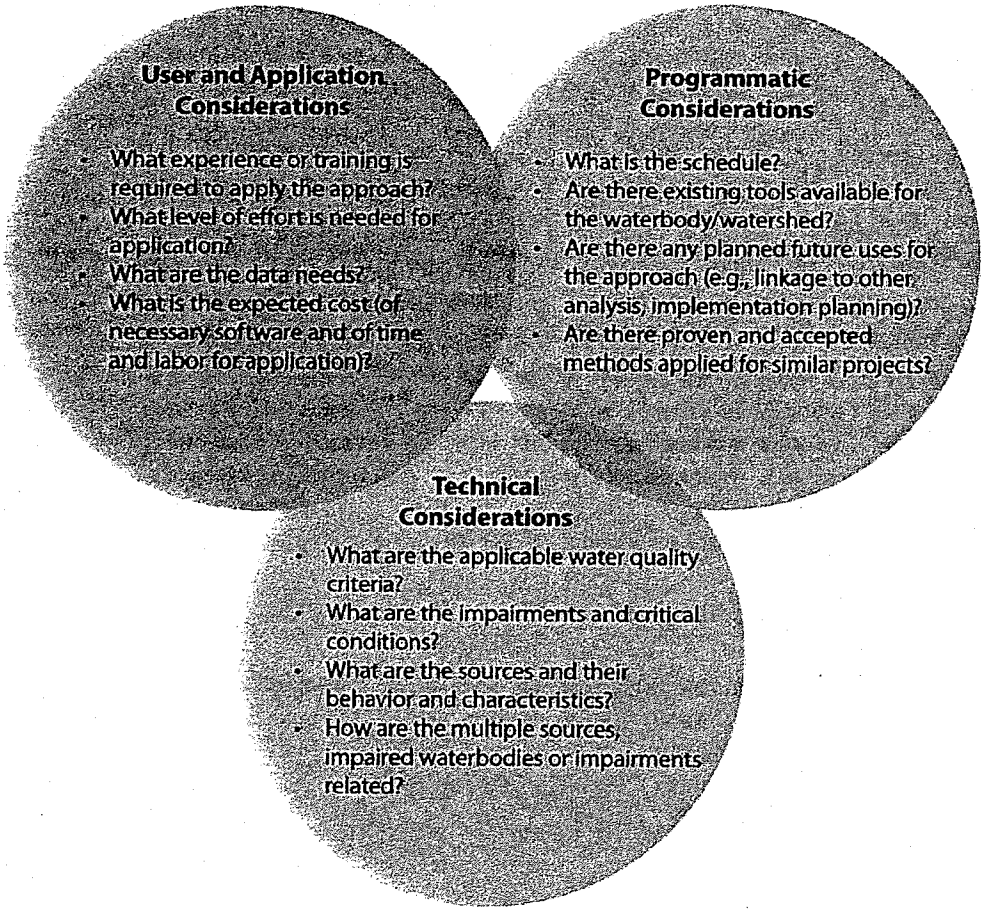


Figure 15. Considerations for selecting a TMDL development approach.

Table 7. Summary of technical considerations for selecting a TMDL development approach

Technical needs of approach	Technical considerations for approach selection		
	Water quality criteria and TMDL targets	Impairments and critical conditions	Sources
Spatial Needs	▪ Are different criteria or TMDL targets applicable in different locations within the watershed?	▪ How many impaired segments are being addressed? ▪ What are the location and distribution of impaired segments?	▪ What type of sources/land uses exist in the watershed? ▪ What are the location and distribution of sources? ▪ At what level do the sources need to be isolated (e.g., gross loading vs. land use specific loading)?
Time-scale Needs	▪ What are the duration and frequency of applicable criteria or targets?	▪ What is the timing associated with impairment (e.g., instantaneous vs. chronic or cumulative effects)? ▪ Are there any temporal trends to capture (e.g., seasonality in waterbody conditions)?	▪ Are the effects due to cumulative or acute loading conditions? ▪ Are there temporal variations in source loading (e.g., due to weather patterns, seasonal activities)? ▪ At what temporal scale do the sources need to be estimated?
Processes to Include	▪ Is criterion based on pollutant level (e.g., concentration) or a measure of response or condition (e.g., flow, habitat quality, eutrophication)? ▪ What are the pollutants?	▪ Is impairment based on a specific pollutant (e.g., sediment, metals) or based on cumulative effects of stressors (e.g., flow, habitat quality, pollutants)? ▪ Is meeting the target dependent on or affected by multiple waterbody measures (e.g., nutrient levels, temperature, pH)? ▪ What are the waterbody critical conditions for loading response (e.g., dynamic, flow variable vs. steady-state)? ▪ If dealing with multiple pollutants, how are they related?	▪ What is the source loading behavior (e.g., precipitation-driven, direct discharge)? ▪ Do sources impact multiple impaired segments (i.e., need for in-stream routing and transport)? ▪ Does the analysis need to evaluate individual and/or cumulative impact of sources?

4.2.1. How Are Water Quality Criteria or TMDL Targets Expressed?

The ultimate goal for any TMDL is to restore the impaired waterbody to meet water quality standards. As discussed in Section 3.2, identifying a TMDL target is typically based on using a numeric water quality criterion or interpreting narrative criteria. The expression of the resulting TMDL target can influence what types of TMDL development approaches are appropriate and how a TMDL analysis considers and represents water quality standards attainment. In many respects, considering the TMDL target for selecting an approach for a stormwater-source TMDL is no different than for any other TMDL. For example, numeric water quality criteria (or a numeric target representing narrative criteria) have an associated magnitude, duration, and frequency. The applicability of an approach can be affected by its ability to simulate at a time-scale necessary for comparison to the water quality target's magnitude, duration and frequency. Targets designed to address acute (short-term) impairments are typically based on instantaneous maximums or daily averages while chronic (long-term) problems (e.g., eutrophication, sediment loading and deposition) can be represented by targets with longer durations (e.g., monthly average concentration, annual loading).

As discussed in Section 3.2, an issue unique to stormwater-source TMDLs is the use of surrogate targets (e.g., flow volume, percent IC) to represent the combined effects of stormwater quantity and quality on maintenance of water quality standards. In these situations, the use of a surrogate target will have a direct bearing on the choice of the technical approach. For example, if using an IC target, the approach chosen must be able to calculate flows from varying levels of imperviousness. Similarly, an analysis that uses peak flow as a target and identification of TMDL allocations and subsequent controls will depend on controlling flow volumes and peak flows, it will be necessary to use an approach that can either simulate the hydrology and hydraulics of a system in response to watershed characteristics or one that can otherwise relate in-stream flow conditions to watershed characteristics (e.g., imperviousness).

> ***Tip: Select an approach consistent with water quality standards***
>
> Regardless of the significant pollutant sources, the TMDL writer should select a technical approach that is suitable for the pollutant of concern. For example, some models do not simulate certain pollutants and, therefore, are not appropriate for certain types of TMDLs. The approach should also provide the necessary output to allow for a direct comparison to the temporal duration specified in water quality criteria.

In Practice: Integrating Stormwater Runoff Volume as a Surrogate for Water Quality Standards into a TMDL Approach in Potash Brook, Vermont

Vermont's water quality standards provide for the use of numeric biological indices to determine the condition of fish and aquatic life based on reference conditions for different waterbody types. Potash Brook, near Burlington, is on Vermont's section 303(d) list as a result of biological impairments, including loss of sensitive taxa, and a compositional shift toward more tolerant species in macroinvertebrate communities. Data suggests that degraded habitat and increased sedimentation are the highest concerns, most likely caused by changes in water flow and increases in sediment erosion and deposition. To effectively address biological impairments in Potash Brook, the Vermont Department of Environmental Conservation selected stormwater runoff volume as a surrogate TMDL measure to represent issues associated with the following:

- Sediment delivered through erosion processes
- Physical effects on the stream channel such as sediment release from channel erosion and scour from increased flows
- Diminished base flow (e.g., decreased groundwater recharge)
- Amount of other potential pollutants (e.g., nutrients, toxics) delivered to Potash Brook is a function of the amount of storm water runoff generated within the watershed.

A high-flow reduction target was established on the basis of the hydrologic conditions of two reference watersheds where aquatic life criteria are attained. Flow duration curves were used to evaluate existing and target conditions for the stream and establish the TMDL. Flow duration curves were developed for both Potash Brook and the reference watersheds, and the difference between the 0.3 percent duration point on the curves was used to derive the reduction target. The 0.3-percentile flow represents the flow that is exceeded by only 0.3 percent of the measured flows and was selected because it approximately equals the one-year flow and the channel forming flow for this stream. The vast majority of reductions are assigned to the WLA, which applies to runoff from urban and developed portions of the watershed, and includes an allocation for future growth. The LA applies to the limited agricultural and open space portions of the watershed.

More information on the Potash Brook TMDL (2006), as well as other hydrology-based TMDLs approved in Vermont, is available at www.anr.state.vt.us/dec//waterq/stormwater/htm/sw_impairedwaters.htm. Other examples of hydrology-based TMDLs include Maine's Barberry Creek (2007) available at www.maine.gov/dep/blwq/docmonitoring/impairedwaters/TMDL/2007/barberry_ck_rep.pdf and Connecticut's Eagleville Brook (2007) available at www.ct.gov/dep/lib/dep/water/tmdl/tmdl_final/eaglevillefinal.pdf.

4.2.2. What Are the Stormwater Sources Affecting Impairment?

Analysis during the previous activity of characterizing the impairment and pollutant sources (Chapter 3) identified the regulated stormwater sources in the watershed that contribute to the impairment of concern. The TMDL writer should also have a general understanding of the relative importance of each source, which can guide decisions regarding technical approaches for TMDL development. It is important that a TMDL approach be able to represent important sources in a way that captures the sources' effect on water quality to calculate appropriate allocations. This is no different for stormwater sources than for other types of point or nonpoint sources. Therefore, when stormwater is a major source affecting impairment, it is important to consider its characteristics when selecting an approach. As discussed in the followings sections, which type of approach is selected for stormwater-source TMDLs will be influenced by the type of sources, size of the source area, and how the source generates and delivers pollutants of concern.

Characteristics of Stormwater Sources that Can Affect Approach Selection

- Type and distribution of sources
  - Pollutant generating activities
  - Spatial coverage
- Pollutant Delivery
  - Timing of loading
  - Delivery mechanism

4.2.2.1. Type and Distribution of Sources

If regulated stormwater sources are within the watershed of the impaired waterbody and discharge the pollutant of concern, they will be included in the TMDL analysis. However, there are varying levels of detail at which the sources can be characterized and quantified in the analysis, affecting both the selection and application of a TMDL approach. Decisions regarding the level of detail for including stormwater sources can include not only the spatial resolution at which sources are represented within the analysis, but also the types of spatial units (e.g., subwatershed, land use types) that can be included and how they are spatially related and represented in the analysis. These decisions will depend primarily on the significance of each source in their effect on the impairment of concern. For example, perhaps an MS4 in an impaired watershed is expected to be a minimal source of the pollutant of concern, whether because it covers a small portion of the watershed, it has already installed a number of effective controls minimizing its effect, or other active sources in the watershed (e.g., agriculture, mining, forestry) contribute significantly more pollutant load. In such a case, it might be appropriate to choose an approach that does not specifically include or calculate loads originating with individual stormwater sources but rather evaluates a cumulative load from all sources (e.g., load duration) and then distributes the total load among sources. Alternatively, if there are multiple regulated stormwater sources in the watershed, including MS4, construction, and industrial, that all represent major contributions of pollutant loading to the system, it will likely be necessary to choose an approach (e.g., watershed model) that can evaluate the watershed at a finer scale, both temporally and spatially, to isolate the source-specific loadings and evaluate their effect on water quality.

One of the first considerations regarding sources is how well they are understood. The analysis of impairment conditions and sources discussed in Chapter 3 helps the TMDL writer understand what and how sources are affecting impairment. This can help to identify the type of information that the technical approach will need to include and also produce, thereby narrowing the range of approach options. If sources and their impacts are well understood based on available data and local knowledge, it might not be necessary to use an approach that evaluates individual sources or provides the ability to predict effects from existing and future source inputs. Some approaches, such as receiving water modeling, can

potentially provide a great deal of information on how known sources will affect receiving water quality but will not provide much information on unknown sources. Land-based watershed modeling, on the other hand, can help to quantify the relative significance of various sources such as urban runoff compared to point source discharges. Data-driven approaches, such as load duration curves, that rely on evaluation of in-stream loads based on monitoring data are very useful when significant observed data are available and the impairments predominantly occur during certain flow conditions. However, they do not typically support direct calculation of loads originating from individual sources and require a supplementary analysis to do so.

Also affecting approach selection is the decision of the spatial resolution for representing the individual stormwater sources in the approach. Stormwater sources can have a variety of activities within their boundaries that contribute to pollutant loads. For example, within an MS4 different land uses (e.g., residential vs. commercial) and areas can contribute varying magnitudes of loads. It might be important to capture those variations in pollutant loading and evaluate subareas within the MS4 boundary, such as areas that drain to certain outfalls or different land uses, to more effectively target BMP implementation. Therefore, it would be appropriate to use an approach that can isolate and calculate pollutant loading from specified *sub-sources*. For example, using a watershed model allows for the inclusion of multiple types of land areas that are represented by characteristics (e.g., soils, pollutant accumulation, imperviousness) that can vary by land use or type, allowing a TMDL writer to not only isolate loads generated within a stormwater source boundary but also by other characteristics such as land use. However, approaches that do not specifically calculate loads from individual sub-sources can still accommodate and capture these variations depending on how they are applied. For example, while a load duration approach calculates a total allowable in-stream load without direct calculation of source-based loads, it can be applied at multiple strategic locations to capture the variability in loading from different sources.

Alternatively, an area within a source's boundary might be small or fairly homogenous, without much variation in pollutant generation. For example, regulated construction sites are relatively small in area and would not likely require further division within their boundaries. As another example, depending on the overlap of an MS4 and the watershed of an impaired water, the portion of the MS4 within the watershed might represent similar land uses and activities (e.g., all residential areas). In these cases, it is likely appropriate to use an approach that evaluates loading on a coarser level, possibly evaluating the cumulative load to an impaired waterbody rather than area-specific inputs.

If regulated construction stormwater sources are important in your watershed, they might present a different set of considerations and challenges for the TMDL analysis than MS4s or industrial sites. Again, there is the question of spatial coverage but also one of temporal effects. MS4s and industrial are static with a definable boundary, while regulated construction sites represent a *moving target* in that they have definable boundaries, but their existence and effects are more intermittent. The temporal aspect of the locations, magnitudes, and activities related to stormwater from construction sites makes it difficult to include in a TMDL analysis. Through the stormwater source characterization and the impairment analysis, the TMDL writer should determine whether construction is an important potential source given the characteristics of the watershed and the impairment. For example, if the watershed is experiencing rapid growth and expansion, construction could be a significant current or future source and might require specific representation in the TMDL analysis. Or perhaps the watershed had a number of construction sites that were active during the time the waterbody was identified as impaired, but the sites are no longer active or contributing to the impairment. In such cases, it might be necessary to select an

approach that can evaluate the temporal variations in waterbody conditions on the basis of time-variable source inputs and other watershed factors (e.g., weather). This type of evaluation is most directly accomplished using a time-variable watershed model. However, other non-modeling approaches can be applied to represent different time frames and source inputs to more generally evaluate the variable effects over time. This can allow the TMDL writer to evaluate past, current, and future conditions related to construction impacts.

Another level of detail in spatial resolution when representing stormwater sources is the potential for including loadings from individual outfalls. While the location of outfalls should be known, it is not always feasible to include or analyze loadings from individual outfalls in a TMDL analysis. To evaluate outfall-specific loads and effects, it is necessary to have data to characterize the outfall discharge (e.g., flow, pollutant concentrations) for at least the critical conditions (e.g., high flows) but preferably under a range of conditions. Data to support this level of detail are often not available. However, if sufficient data are available, it is important to consider the added benefit as well as the added effort in conducting the analysis. The TMDL writer along with the permit writer should identify the benefits of evaluating loading at the outfall level and whether those same benefits could be achieved by conducting the analysis at a broader scale (e.g., subwatershed level) and likely with less expended effort and resources.

4.2.2.2. Pollutant Delivery

How and when a pollutant is delivered to a receiving waterbody is an important consideration in selecting an appropriate TMDL approach. For stormwater-related sources, the typical pathway for pollutants is accumulation and washoff, where overland runoff transports pollutants deposited on land surfaces to stormwater conveyances and eventually receiving waterbodies. However, depending on the type of pollutant, the timing of delivery or mode of transport can present unique needs for a TMDL development approach. For example, many pollutants are delivered in dissolved form in stormwater runoff, while others can be transported adsorbed to sediment particles. Waterbodies that are impaired by sediment-associated pollutants such as phosphorus or organics can therefore require an approach that simulates the processes of sediment erosion and transport to fully evaluate the pollutant loading and impacts.

In addition to the delivery pathway, the timing of pollutant loading is another consideration for the evaluation of stormwater. Stormwater is typically driven by precipitation events and subsequent runoff and discharge. However, dry-weather flows delivered through MS4 infrastructure caused by such things as automobile washing and lawn watering also might be a source of loading to a waterbody, especially in arid regions. This situation might require a TMDL approach that can evaluate both precipitation-driven sources during wet weather and also direct inputs occurring during dry weather. For example, load duration curves and watershed models can be applied to evaluate loads for different flow conditions.

Regardless of the conditions of delivery, stormwater source activity can also occur during different times of year. For example, pollutants associated with deicing and winter road maintenance are more likely to be deposited and delivered during winter months while pollutant runoff from residential car washing might be more frequent during warmer summer months. These situations might warrant a TMDL approach that can evaluate and capture the variations in pollutant loading across months and seasons. For example, many watershed models can produce either daily continous loads or monthly loads that would capture the variations in loading during different seasons.

4.2.3. What Are the Critical Conditions?

As discussed in Chapter 3, the critical conditions for a TMDL represents the combination of environmental conditions (physical, chemical and biological) under which impairment occurs. This can include such things as the environmental processes that affect impairment (e.g., nutrient dynamics affecting dissolved oxygen levels, flow modification due to increased development affecting in-stream habitat) and the timing of impairment (e.g., certain months or times of day). From the characterization step discussed in Chapter 3, the TMDL writer should understand the impairment and the effect of stormwater sources on receiving water quality and can now evaluate how to capture that in the selected approach.

For example, some stormwater-related impairments are not associated with specific pollutants and therefore require the analysis of a variety of pollutants and processes to capture the impairment conditions. Evaluating the effects of stormwater and identifying necessary allocations might require the evaluation of such things as sediment delivery and deposition, peak flows, and nutrient loading and resulting eutrophication dynamics. Another example is critical conditions related to low dissolved oxygen that can be affected by the timing and availability of nutrient loads and also on seasonal factors such as temperature, resulting algal growth, and flow. The TMDL writer should evaluate the processes that need to be included to sufficiently represent the critical conditions when selecting an approach for developing the TMDL.

In Practice: Selecting a TMDL Approach to Capture Critical Conditions in Ballona Creek, California (2005)

Segments of Ballona Creek and Sepulveda Canyon Channel were included on 1996, 1998, and 2002 303(d) lists for cadmium, copper, lead, selenium, silver, zinc and toxicity. Data analysis indicates differences in waterbody conditions (e.g., water quality, flow) and sources between dry and wet weather. To capture the varying critical conditions and source loading, two distinct approaches were used to develop the TMDL.

Because the metals criteria are based on hardness, separate wet- and dry-weather targets were developed to reflect the different hardness values and flow conditions in the creek and its tributaries. For the purpose of this TMDL, wet weather is defined in terms of flow rather than rainfall. Wet weather is defined as any day in which the maximum daily flow is equal to or greater than 40 cubic feet per second (cfs) based on the 90th percentile of flows measured over a 10-year period.

The dry-weather loading capacity for each metal was derived by multiplying the hardness-adjusted, dry-weather numeric targets by the critical flow assigned to these two waterbodies. The wet-weather TMDL calculation was based on the simulation of the hydrologic processes and watershed metals loading using a watershed model (HSPF). Using simulated flows and metals concentrations, a load duration curve approach was used to establish the wet-weather loading capacity. Loading capacities were calculated by multiplying the daily storm volume by the appropriate numeric water quality target.

A grouped mass-based WLA was developed for stormwater permittees (Los Angeles County MS4, Caltrans, General Industrial and General Construction) for both dry weather and wet weather. Because there are no identified areas in the watershed that discharge directly to Ballona Creek or a tributary rather than through the storm drain system, the WLA was equal to the calculated loading capacity minus the estimated loads from atmospheric deposition. The grouped stormwater WLA was partitioned among the MS4 permittees (77,546 acres) and Caltrans (1,080 acres) using an estimate of the percentage of land area covered under each permit.

The Ballona Creek metals TMDL report is at www.waterboards.ca.gov/losangeles/board_decisions/basin_plan_amendments/technical_documents/2005-007/05_0831/StaffReport.pdf.

4.3. Applying Approaches for Stormwater-Source TMDLs

Once an approach is selected for TMDL development, the TMDL writer will apply the approach to calculate the loading capacity and associated allocation for sources. While all sources present challenges in deciding how to accurately represent their inputs and effects, stormwater sources can require some unique considerations when applying a TMDL approach. The two key issues to address when developing TMDLs with stormwater sources are

1. How to represent stormwater source characteristics (e.g., discharge flows and concentrations)
2. How to isolate and estimate the loads transported and discharged through the stormwater system

Several commonly used TMDL approaches were introduced previously in Section 4.1. This section discusses the considerations for developing TMDLs with stormwater sources using these different methods and is organized according to whether the approach is land-based or waterbody-based, as identified in Table 6. Table 8 summarizes the advantages and disadvantages of each method, and the following sections provide more detail on their application for stormwater-source TMDLs.

Table 8. Summary of commonly used TMDL development approaches

Approach	Can be combined with...	Advantages	Disadvantages
Land-based Approaches			
Watershed Models	▪ Receiving Water Model ▪ Load Duration Curves	▪ Can directly simulate regulated stormwater sources as distinct hydrologic units to facilitate better representation of source inputs. ▪ Enables source-level allocations ▪ Provides flexibility in expression of allocations, from gross to detailed, site-level (if detailed model is used). ▪ Provides time-variable simulation and results to better represent varying conditions for regulated stormwater source inputs and impacts (if dynamic model is used). ▪ Flexibility in how model is set up to represent land units allows for simulation of subareas or land uses within regulated stormwater source boundaries to define spatial inputs and impacts for targeting implementation. ▪ Allows users to simulate potential changes in water quality conditions that might result from implementation activities.	▪ Requires significant data and analysis if outlet-level allocation is necessary. ▪ Direct simulation of stormwater sources is dependent on accurate information on drainage areas and runoff. ▪ Moderate or general watershed models (e.g., those with monthly time-steps) have limited capabilities for temporal evaluation or highly variable stormwater sources. ▪ Model accuracy dependent on having sufficient water quality data for calibration. ▪ Requires trained or experienced staff to run the model and understand model assumptions and limitations.
IC Method	▪ Watershed Models ▪ Load Duration Curves	▪ Because area of impervious surfaces is easily explained and tangible, can be more understandable to the public. ▪ Is translated more easily into management actions.	▪ Requires supplemental analysis and data to support linkage to a load . ▪ Requires sufficient data to support the link between IC and water quality standards. ▪ Is not appropriate for waterbodies affected by a mix of sources other than urban runoff.

Approach	Can be combined with...	Advantages	Disadvantages
Export Coefficients	▪ Percent Reduction ▪ Load Duration Curves	▪ Is simple to apply.	▪ Is usually based on regional or national literature values that might not be representative of local conditions. ▪ Does not provide a direct link to waterbody conditions and use support.
Simple Method	▪ Percent Reduction ▪ Load Duration Curves	▪ Is useful in watersheds lacking flow data. ▪ Is specifically designed to evaluate stormwater pollutant loads from impervious areas.	▪ Assumes all loading originates on impervious surface during storm events, not accounting for runoff from impervious areas or subsurface inputs and baseflow loading. ▪ Because it uses a static runoff concentration, does not account for variability in loading or in-stream levels. ▪ Not appropriate for large watersheds (>1 mi^2) or non-urban areas.
Waterbody-based Approaches			
Receiving Water Models	▪ Watershed Model ▪ Mass Balance	▪ Represents a high level of spatial variability within a waterbody, allowing for detailed outfall-based allocations ▪ Provides time-variable simulation and results to better represent varying conditions for regulated stormwater source inputs and impacts (if dynamic model is used).	▪ When applied independently, is limited to allocations set for specific input points; requires combination with a watershed model for land-based allocation analysis. ▪ Provides limited allocation opportunities when source is not discharging directly to the receiving water (e.g., for construction sites in upland locations). ▪ Provides limited allocation options when applied as a steady-state (non-dynamic) modeling application.
Load Duration	▪ Watershed Models ▪ Simple Method	▪ Is based on observed monitoring data, providing a data-based representation of existing conditions. ▪ Identifies the allowable and existing loads for all flow conditions, providing insight into the critical conditions and accounting for the natural variations in loading and in-stream conditions. ▪ Because it is based on observed in-stream conditions, can capture the effects of unknown sources (e.g., failing septic systems, illicit connections).	▪ Provides limited information regarding the relative magnitude of source loads. ▪ Requires supplemental analysis to distribute loading capacity into source-based allocations. ▪ Requires robust and consistent records of flow and in-stream water quality data. ▪ Is applicable only to non-tidal streams or rivers.
Percent Reduction Method	▪ Simple Method ▪ Export Coefficients	▪ Is simply and quickly applied. ▪ Easy for the public to understand.	▪ Assumes a 1:1 relationship between reductions in pollutant loading and resulting reductions in concentration. ▪ Does not calculate source-based loads, requiring supplementary analysis to identify stormwater WLAs.

Approach	Can be combined with...	Advantages	Disadvantages
Mass Balance or Steady-state Analysis	▪ Receiving Water Models	▪ Relatively simple to apply. ▪ Is based on observed monitoring data, providing a data-based representation of existing conditions.	▪ Typically focuses on a single critical condition (e.g., critical flow) or long-term average conditions (e.g., monthly loading and concentration), not allowing for evaluation of variability in pollutant loading or waterbody conditions. ▪ Simple representative of pollutant fate and transport.

4.3.1. Land-based Approaches

This section discusses the modeling and non-modeling TMDL approaches that evaluate land-based loading or conditions and issues related to their use in stormwater TMDLs.

4.3.1.1. Watershed Models

Watershed models are commonly applied to provide a quantitative linkage between source contributions and waterbody response for TMDL development. This category of models loosely refers to numerical frameworks that address a combination of land-based rainfall/runoff and contaminant loading processes and conveyance of flow and contaminants within a stream, impoundment, or some other type of receiving waterbody. Commonly available data used to drive watershed models and accurately simulate conditions within receiving waters include land cover, soil type, meteorological characteristics, and stream/impoundment dimensions. The level of complexity associated with each of these models varies widely from annual flow and contaminant load delivered from a watershed to sub-hourly prediction of detailed hydrologic processes at the land use or site level.

While structure and simulated processes vary from one model to the next, watershed models provide a useful basis for allocation to watershed sources contributing to waterbody impairment, including permitted stormwater sources. Most watershed models perform calculations on a land unit basis. That is, the modeler divides a drainage area into smaller land units to enhance representation of heterogeneities. These land units can represent variable soil characteristics, political boundaries, or more commonly, land use or cover. Many models take this land cover breakdown one step further and represent impervious and pervious land cover types using different mathematical formulations. Impervious land, for example, is not subject to infiltration and associated subsurface processes. Figure 16 illustrates how a typical watershed model categorizes each area of land by land use type (e.g., residential, forest, agriculture) and then routes flow and loads delivered from those within each watershed to the receiving waterbody. Watershed models typically have the capability to separate the watershed into a number of smaller subwatersheds. Some then have the added capability to route the flow and load contributed from each subwatershed to the corresponding stream reach to the downstream reach, creating a system of connected waterbody segments. Dividing a watershed into land cover-based units typically provides a logical basis for developing source-based allocations in a TMDL. For example, specific allocations (in terms of time-variable flow and contaminant loads) can be made to each land cover category represented in a watershed model. A watershed model might, for example, represent the following five land cover categories: forest, pasture, crop, residential–pervious, residential–impervious. In this situation each

category might receive independent allocations, which collectively result in the receiving water for the drainage area to attain and maintain water quality criteria.

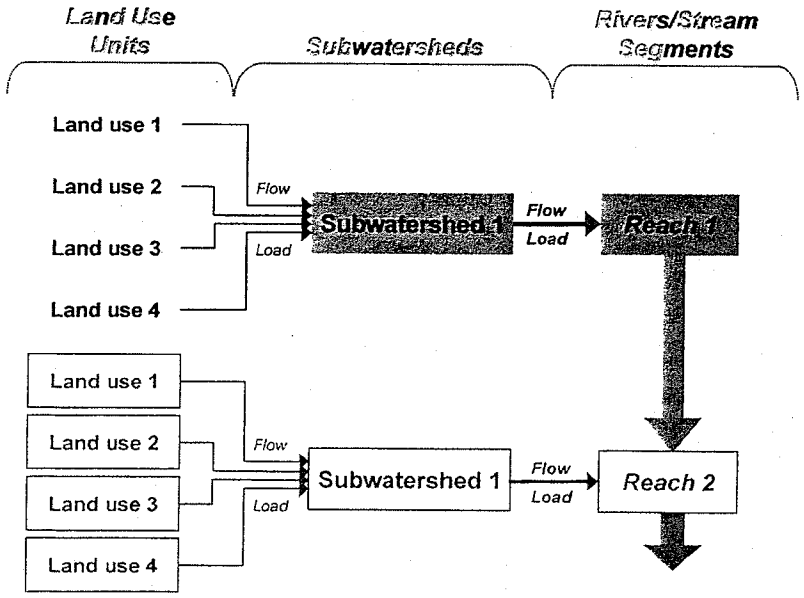


Figure 16. Typical watershed model elements for simulating runoff and pollutant loading from watershed land uses to receiving waterbodies.

Of the approaches presented in this section, watershed models can have the greatest variation in the type and method of application of the approach. Watershed models can vary widely in their capabilities, influencing their applicability for a particular TMDL application. The applicability of a model for simulating stormwater sources in a TMDL analysis can be affected by the model's capabilities, including the following:

- Timestep (temporal resolution)
- Ability to represent spatial variations (spatial resolution)
- Processes that are simulated

The temporal resolution can affect the model's ability to capture the variations in stormwater loading and the waterbody response. Its spatial scale can determine how watersheds are divided and represented, including how stormwater sources are isolated. The processes simulated by a model will often be a primary determining factor in model selection for TMDL development. A model's ability to simulate certain land-based processes (e.g., pollutant accumulation, runoff, erosion), waterbody processes (e.g., in-stream transport, nutrient dynamics, die-off), and management processes (e.g., stormwater detention) can determine whether it is appropriate for use in a certain TMDL project and also how the model will be applied. Table 9 identifies several model capabilities that can affect how it can be used to evaluate and estimate stormwater source loads. For each capability, the table rates a number of watershed models used for TMDL development, including:

Resources: For more information on selecting watershed models based on needs for a given TMDL, refer to the Resources list at the end of this chapter in Section 4.5.2.

- Annualized Agricultural Non-Point Source (AnnAGNPS)
- GWLF
- HSPF
- Loading Simulation Program in C++ (LSPC)
- Program for Predicting Polluting Particle Passage through Pits, Puddles, and Ponds—Urban Catchment Model (P8-UCM)
- Source Loading and Management Model (SLAMM)
- Soil and Water Assessment Tool (SWAT)
- Storm Water Management Model (SWMM)

Table 9. Commonly used watershed models and select capabilities for evaluating stormwater sources in TMDLs

Simulation capability	AnnAGNPS	GWLF	HSPF	LSPC	P8-UCM	SLAMM	SWAT	SWMM
Simulates land-based pollutant accumulation and runoff	●	⊙	●	●	⊙	●	●	●
Simulates dynamic daily conditions (variable precipitation/flow)	⊙	○	●	●	⊙	●	⊙	●
Simulates conveyance systems	○	○	⊙	⊙	○	⊙	○	●
Simulates sediment erosion and transport	●	⊙	●	●	⊙	●	⊙	⊙
Simulates in-stream fate and transport	○	○	●	●	○	○	⊙	⊙
Simulates BMPs	●	○	⊙	⊙	●	●	●	⊙
Is appropriate for urban watersheds	○	○	⊙	⊙	●	●	○	●
Is appropriate for mixed land uses	⊙	⊙	●	●	○	⊙	⊙	⊙

○ = Low
⊙ = Medium
● = High

Other modeling references (USEPA 1997, 2005c) include summaries of model applicability for more general considerations, such as land uses simulated, pollutants simulated, and waterbody types simulated as well as for considerations related to their application. For example, *TMDL Model Evaluation and Research Needs* (USEPA 2005c) provides a series of tables rating the capabilities or applicability of more than 60 available watershed and receiving water models in the following categories:

- **TMDL Endpoints.** Considers the model's ability to simulate typical TMDL target pollutants (e.g., nutrients, toxics, bacteria) and expressions (e.g., load vs. concentration). Characterizes the models depending on the timestep of the simulation for the target (e.g., steady state, annual, daily, hourly).
- **General Land and Water Features.** Rates models according to their ability to simulate general land uses (e.g., urban, agricultural) and waterbody types (e.g., river, lake, estuary).
- **Special Land Processes.** Rates models on their ability to simulate more than 15 special land processes such as wetlands, hydrologic modification, urban BMPs (e.g., street sweeping, detention ponds), and rural BMPs (e.g., nutrient control practices, irrigation practices).

- **Special Water Processes.** Rates models on their ability to simulate special processes occurring in receiving waterbodies such as air deposition, stream bank erosion, algae, and fish.
- **Application Considerations.** Rates models on the following practical considerations affecting their application—experience required, time needed for application, data needs, support available, software tools, and cost.

Regardless of what type of watershed model is used, TMDL writers can calculate WLAs for permitted stormwater sources (e.g., MS4s, industrial facilities, and construction sites) in a number of ways using watershed models. The primary issues with modeling approaches that include stormwater sources are similar to those for other approaches, i.e., how to most accurately represent the sources and how to isolate and calculate their pollutant load contributions. Because models typically provide continuous simulation of multiple land- and waterbody-based processes, they can provide more flexibility than non-modeling approaches in representing stormwater sources.

An essential part of defining the contributions from permitted stormwater sources depends on isolating the *regulated boundary* of the source, or the drainage area that delivers stormwater runoff to the source's system. (See Chapter 3 about delineating the regulated area of a stormwater source.) Stormwater permits require all permittees to have documentation of the system configuration, its outfalls and boundaries. The level of detail of this information, however, will vary by permittee. Some might have detailed GIS-based coverages of storm sewer outlets and the areas they drain. Others might have coarse, hand-drawn maps roughly identifying their outlet locations and property boundaries. Once the TMDL writer delineates source areas, the issue becomes how to account for the delineated source area in the modeling analysis. The selection of an approach to include permitted stormwater sources in a modeling analysis for load calculation and allocation primarily depends on the available data and the importance or magnitude of the types of permitted stormwater sources. The two primary approaches include the following:

1. Including the permitted stormwater sources as discrete land units within the model—units that produce flows and loads separate from other watershed land areas and are hydrologically connected to the stream system
2. Calculating the load from the regulated stormwater source in a supplementary analysis using the model results of loads generated by watershed land uses

Which approach is used might depend on the significance of permitted stormwater sources to the impairment and the level of detail needed to characterize each source (e.g., evaluate as a whole vs. evaluate subareas within the regulated boundary). The first approach is most suitable for watersheds where stormwater sources are considered significant sources of impairment and sufficient data exist to define and isolate their regulated boundary, as well as discharge quality and quantity. The second approach can be used when regulated boundaries are not easily defined or because it is more important to evaluate the land use-specific effects on water quality rather than the effect of the cumulative contributions from a stormwater source (e.g., a regulated MS4) as a whole. For example, the regulated boundary of an MS4 might cover the majority of the watershed of the impaired waterbody. In such a case, it might be more efficient to set up the watershed model to evaluate the entire watershed area and the specific land uses or activities and then estimate and subtract the small portion that is delivered to the waterbody through nonpoint source runoff rather than the MS4. Both approaches are discussed in greater detail in the following sections.

4.3.1.1.1 Including Stormwater Sources as a Modeled Land Unit

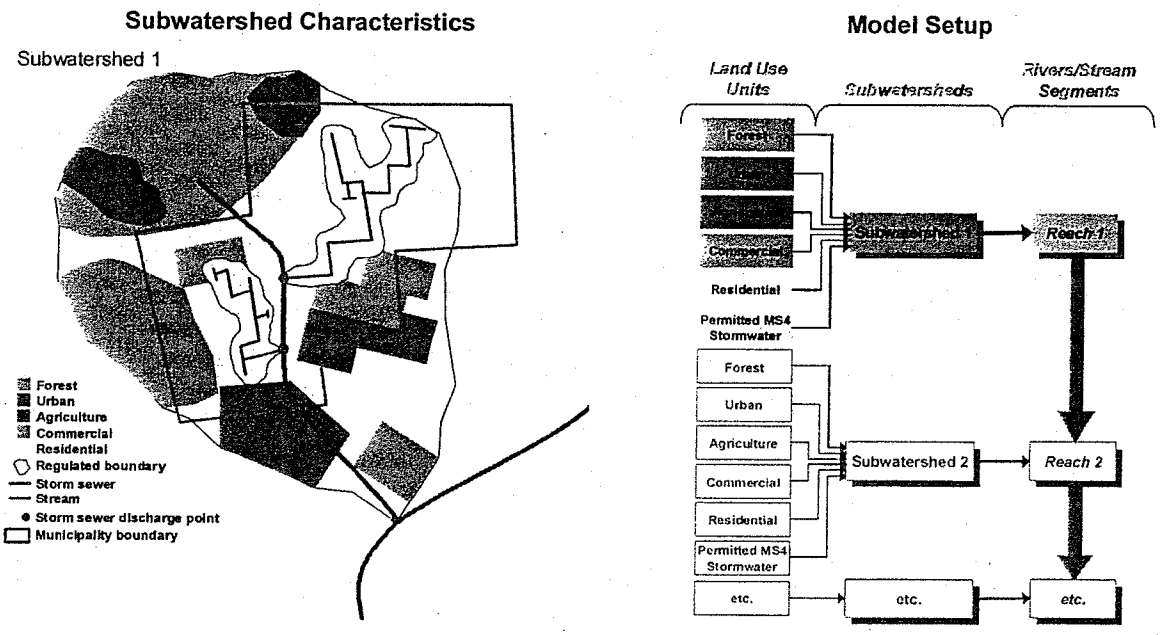
The most direct approach for calculating stormwater source allocations is to develop a watershed model including the regulated boundary. This means that the TMDL writer can isolate and represent the regulated area in the watershed model as a separate land unit—representing the area that produces stormwater runoff that is delivered to the receiving waterbody through the permittee's stormwater conveyance system. Using this approach, the model would internally calculate flow and pollutant loading separately for each stormwater source's area. For example, the TMDL writer could separate land covering each permitted industrial facility into individual land units to independently determine flow and contaminant contributions from each permitted industrial facility. The TMDL writer can use the same approach for construction sites (or areas expected to undergo construction) and areas covered by an MS4 permit.

> ***Tip: Modeling surface runoff vs. baseflow loads in MS4s***
>
> The use of watershed models allows a TMDL writer to estimate both surface runoff and baseflow loads from all sources, including MS4s. A strict reading of the MS4 definition would suggest that only groundwater that enters the stream by reemerging or infiltrating into the conveyance system should be covered by the MS4 permit, while groundwater that discharged directly to the stream would not be covered. However, in some situations groundwater discharge can be included within the WLAs because the entire watershed is within the MS4 boundary and much of the groundwater load (e.g., for bacteria) was assumed to derive from leaky sewer systems which are also covered by NPDES permit. In the case of fecal coliform and a watershed entirely within MS4 boundaries it is probably safe (and easier) to include all the load within the WLAs. For other parameters, however, it might not be so clear. For example, for TDS the natural geologic background in groundwater would be inappropriate to lump into the MS4 WLA.

Figure 17 illustrates this process for calculating the WLA for an MS4. The example assumes that the overlay of the storm sewer system is available, along with the corresponding areas that drain to that system for delivery to watershed streams (i.e., the regulated boundary), as shown in the *Subwatershed Characteristics* panel of the figure. Therefore, the TMDL writer can isolate areas drained by the system and include these areas in the model as discrete units. As shown in the *Model Setup* panel, the model then simulates flow and loads contributed by the discrete MS4 units within each subwatershed to the respective stream segment. Because of this setup, the TMDL writer can directly calculate WLAs within the model, similar to the approach for other simulated land units (e.g., urban, agriculture), as shown in the *Allocations based on Model Output* panel.

If the individual stormwater resources are represented in the model by their regulated boundaries, it will be necessary to characterize their land areas for simulation of runoff and loading. For example, when a watershed model is set up, the individual land use or other source areas are characterized by things such as soil type and characteristics (e.g., erodibility), perviousness, and measures of pollutant accumulation and generation. If available, monitoring data from the stormwater source should be used to characterize the source area and their associated runoff. If such data are not available, the areas included within the stormwater boundaries can be characterized in the same manner as other land uses. This is typically done by using GIS coverages such as land use, soil type, and topography to characterize the physical conditions of the land areas and site-specifc calculations or default values to represent pollutant accumulation for certain land use types.

The extent to which TMDL writers can use this approach of including stormwater sources as modeled land units depends primarily on the level of detail available geographically for each stormwater source, the data available to characterize pollutant generation and washoff from the source area and, in some cases, the capabilities of the watershed model.



Allocations based on Model Output

Sub.	Land Use	Allocated Load (kg/yr)
1	Forest	3.87
1	Urban	15.37
1	Agriculture	15.43
1	Commercial	3.6
1	Residential	29.16
1	MS4	29.57
1	Total	97
etc.	etc.	x

Figure 17. Process for calculating MS4 allocation when the MS4 drainage area is included in the model as a discrete land unit.

In Practice: Modeling Sediment Loads from Permitted Construction in the Potomac Direct Drains, West Virginia, TMDL (2008)

West Virginia's 2006 section 303(d) list includes 29 impaired streams in the 927-square-mile Potomac Direct Drains watershed in Berkeley and Jefferson counties. Many of the listed waters are biologically impaired on the basis of a narrative water quality criterion that prohibits the presence of wastes in state waters that cause or contribute to significant adverse effects on the chemical, physical, hydrologic, and biological components of aquatic ecosystems. SI analyses indicated sedimentation as a causative stressor in many of the streams, and sediment TMDLs were developed.

In recent years, the eastern panhandle of West Virginia has undergone significant development, with agricultural land and open space being converted to roads and housing subdivisions. The increased

construction activity is a potential source of sediment to the impaired waterbodies. At the time the TMDLs were developed, 297 construction sites encompassing 8,470 acres were registered, or had registrations pending, under the general permit.

The Mining Data Analysis System (MDAS) was used to represent the source-response linkage for sediment. Sediment TMDLs were developed using a reference watershed approach where MDAS was used to model sediment loading from a reference watershed. The reference loading rate was normalized for the Potomac Direct Drains watershed to establish the numeric TMDL target for sediment.

Sites subject to the Construction Stormwater General Permit were represented in the model using precipitation and runoff from the registered disturbed area and an assumption that proper installation and maintenance of required management practices would achieve an approximate 60 percent reduction of the sediment loading contributed by barren land. All registered sites and sites with registrations pending as of October 2006 were incorporated. All active registered sites and pending site registrations as of October 2006 were provided individual WLAs in the TMDL.

The Potomac Direct Drains TMDL reports are at www.wvdep.org/alt.cfm?asid=140.

4.3.1.1.2 Calculating Stormwater Source Loads Outside of the Model

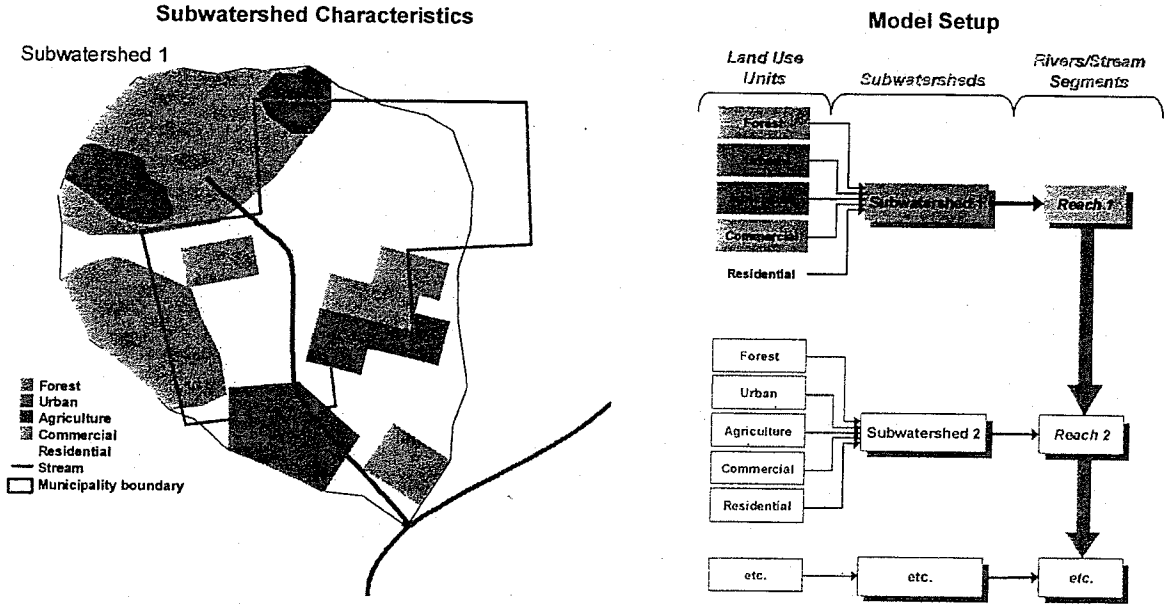
More commonly, the TMDL writer develops the watershed model based on typical land cover categories, without specifically including the regulated boundaries of stormwater sources. This is typically done because the boundaries of the area draining to the source's MS4 are not yet available or it is decided to focus on the land-use specific effects in more detail. In such situations, the TMDL writer will develop, calibrate, and apply the watershed model to TMDL development first, and then subsequently make allocations to permitted stormwater sources on the basis of their respective boundaries, whether represented by the regulated boundary or some alternative boundary (e.g, jurisdictional area) in the absence of the regulated boundary. The TMDL writer makes this allocation by overlaying the land cover represented in the model with applicable stormwater source area boundaries, such as the areas of an industrial facility exposed to stormwater runoff or the regulated MS4 boundary. The TMDL writer then determines the flow and pollutant load contribution associated with the various land cover categories that fall within the permitted stormwater source area boundary. This is often done by determining the unit area flow and pollutant loading for each land cover category on the basis of model results. The TMDL writer can then multiply the unit area rates by the corresponding area of the stormwater source that falls within that land cover category to calculate the portion of the land-use load that originates within the stormwater source boundary. To find the total load for the permitted stormwater source, the TMDL writer can then sum the land use-specific loads.

Figure 18 illustrates this type of process for calculating the WLA for an MS4 when the regulated boundary for the stormwater source is not included as a discrete area in the model. Unlike the example in Figure 17, the exact coverage of the storm system and the regulated boundary draining to the system has not yet been delineated by the permittee. Therefore, the model is set up to include only watershed land uses (see *Model Setup* panel in the figure), regardless of the MS4's boundary. The land-use loads are then used as the basis for calculating the load allocated to the MS4. This is done using an alternate boundary representing

Tip: Regulated Boundary vs. Jurisdictional Boundary

The most accurate way to represent a stormwater source's runoff and pollutant load contributions in a watershed model is to use the *regulated boundary*—the area actually generating and delivering runoff to the storm sewer system. However, many TMDLs represent the regulated stormwater source simply using the jurisdictional boundary (e.g., the municipal boundary for a small MS4) rather than the regulated boundary. As discussed in Chapter 3, the TMDL writer should work with the permitting authority to identify and obtain the regulated boundary to include in the modeling analysis or identify an appropriate alternative boundary if it does not exist.

the MS4 (e.g., jurisdictional boundary) rather than the actual area draining to the system. As shown in the *Allocations based on Model Output* panel of the figure, the areas of each land use that fall within the regulated MS4 boundary is calculated and multiplied by the loading rate for that land use. These loads are then totaled to calculate the total load attributed to the MS4.



Allocations based on Model Output

Sub.	Land Use	Modeled Load (kg/yr)	Area (acre)	Unit Area Loading (kg/acre/yr	MS4 Area in Land Use (acres)	MS4 Load (kg/yr)	Allocated Load (kg/yr)*
1	Forest	5	110	0.045	25	1.13	3.87
1	[illegible]	25	65	0.385	25	9.63	15.37
1	[illegible]	20	35	0.571	8	4.57	15.43
1	Commercial	12	40	0.300	28	8.40	3.6
1	Residential	35	120	0.292	20	5.84	29.16
1	MS4	-	106	-	-	-	29.57
1	Total	97	476	-	106	29.57	97
etc.	etc.	x	x	x	x	x	x

* Allocated load = modeled load – MS4 load

Figure 18. Process for calculating MS4 allocation when the specific stormwater drainage boundary is not included in the model and MS4 load is calculated based on percent of area within each modeled land use.

In Practice: Using watershed model-based approach for MS4 WLAs in the Christina River Basin

The Christina River Basin High-Flow Nutrient TMDL (www.epa.gov/reg3wapd/tmdl/pa_tmdl/ChristinaMeetingTMDL/index.htm), established by EPA in conjunction with Pennsylvania, Delaware, and Maryland, demonstrates the approach of calculating MS4 WLAs on the basis of watershed model output and jurisdictional boundary. TMDLs were determined for the Christina River and its tributaries using a watershed model (HSPF) combined with a receiving water model (Environmental Fluid Dynamics Code [EFDC]). The HSPF model represented contributions from 10 land cover categories: residential-septic, residential-sewer, agricultural-livestock, agricultural-rowcrop, agricultural-mushroom, open land, forested, wetlands/water, undesignated, and urban.

After determining the allowable nutrient load contributions from each land cover category for each subwatershed, the allowable loading was summarized for each township/municipality covered under the MS4 permit. To do this, the municipality boundary GIS layer was overlaid with the land use coverage. Nutrient loadings were then estimated for each land cover category within each municipality boundary within each of the modeled subwatersheds.

Because data were not readily available to determine stormwater outfall locations or to distinguish between areas within the municipalities that collected/conveyed stormwater and those that are truly nonpoint sources, the WLAs were based on jurisdictional boundaries. It was assumed that as part of the Phase II process more detailed stormwater information would be collected. This would enable the LA portion (i.e., that representing the truly nonpoint sources not delivered to receiving waters through stormwater collection/conveyance) to be extracted from the initial MS4 WLA allocations.

4.3.1.1.3 Modeling Specific Stormwater Conveyances and Discharges

Detailed stormwater conveyance models might be available in urbanized areas to support identification of allocations to regulated stormwater sources, particularly MS4 infrastructure. Stormwater models, often developed using the SWMM modeling framework, are implemented to support engineering design. They are generally capable of representing the effects of different storm events on flow throughout surface and subsurface components of a stormwater network. Thus, they are able to predict flow at individual stormwater discharge points to a receiving water.

It is possible to modify these models so that they also represent long-term conditions and contaminant loading. Employing this approach would provide the greatest level of detail for stormwater allocation in TMDLs (particularly for regulated MS4s and permitted industrial facilities and construction sites within regulated MS4 boundaries); however, it can be cost-prohibitive for TMDL development because of the time and effort needed to set up and calibrate a model at that level of detail. The number of outfalls to include could require the model be set up at a spatial level that is not supported by available data. For example, to include inputs from individual outfalls, it is necessary to have monitoring data to characterize the discharge from each outfall.

4.3.1.2. Impervious Cover Method

The IC method for stormwater TMDL development involves setting a target of percent IC for the watershed of the impaired waterbody to represent attainment of water quality standards. As discussed in Chapter 3, many areas affected by stormwater sources experience impairments due to the increase in the frequency and volume of surface runoff from impervious surfaces as well as the degraded quality of surface runoff. Therefore, the use of a target based on IC relates the amount of impervious surface to the resulting runoff volume and pollutant loading. This approach has been used in areas where waters are listed on the basis of biological impairment, and stormwater runoff has been determined to be the .

primary cause of impairment. The approach should focus on effective imperviousness (i.e., a calculation of imperviousness that reflects the extent to which water falling on impervious areas is infiltrated, evapotranspired or reused) rather than total imperviousness. The target can represent the cumulative effects of both flow quantity and flow quality or the runoff and loading of a particular pollutant (e.g., metals, sediment, nutrients). The target should be used with available data to establish a link between IC, associated pollutant loading, and resulting waterbody conditions to calculate the loading capacity for the TMDL. Because the approach relies on a linkage between IC and the resulting runoff and waterbody effects, the approach is not be appropriate in areas where multiple sources other than urban runoff (e.g., wastewater treatment plant discharging nutrients) are affecting biological impairment.

In Practice: Using the Impervious Cover Method to Develop TMDLs in the State of Connecticut

To support TMDL development for waters impaired by stormwater, the state of Connecticut evaluated the relationship among IC and stream biological health to establish a statewide target using the surrogate measure of IC to represent attainment of water quality standards and support for aquatic life uses. The evaluation of statewide GIS-derived estimates of IC and macroinvertebrate data to identify a relationship among the parameters showed that measures of biological community (e.g., taxa richness) decreased with increasing IC. Using this analysis Connecticut Department of Environmental Protection established a target of 12 percent IC as representing maintenance of the state's aquatic life criteria.

4.3.1.3. Export Coefficients

Export coefficients are measures of typical loading rates from certain land uses or sources. In TMDLs they would typically be used to calculate existing loads on the basis of the land use distribution in a watershed and would often be combined with a supplementary approach that calculates an allowable load on the basis of in-stream targets (e.g., percent reduction). Export coefficients can be obtained from literature values from regional or national studies (e.g., EPA's NURP study [USEPA 1983]) or based on site-specific sampling of stormwater from individual land uses. The TMDL writer should evaluate the applicability of the coefficients to the watershed of the impaired waterbody and decide whether they are representative and appropriate. In addition, it is important to use the export coefficients in conjunction with some type of analysis of in-stream conditions to support calculation of a loading capacity.

4.3.1.4. Simple Method

The Simple Method calculates pollutant loading on the basis of stormwater runoff and typically is used in combination with another waterbody-based approach to support TMDL calculations to meet a waterbody target. For example, the Simple Method can be used to calculate the existing loading and then the percent reduction method would be applied to calculate the corresponding loading capacity. In other instances, the Simple Method equation can be applied to represent conditions assumed to meet water quality standards, such as using the applicable criteria as the allowable runoff pollutant concentration or using impervious targets to calculate the runoff and resulting loads. Regardless of how it is applied, the Simple Method will likely result in a gross pollutant load for the drainage area of an impaired waterbody. It would be necessary to distribute that load among the sources to set WLAs and LAs using such characteristics as land use areas

Resources: For more information on the Simple Method, refer to the Resources list at the end of this chapter in Section 4.5.3.

or jurisdictional areas. Alternatively, the Simple Method can be applied for delineated source areas to calculate loads from the different sources in the watershed.

In Practice: Using the Simple Method to Support Development of the Swamp Creek Fecal Coliform TMDL (2006)

Washington's Swamp Creek, north of Seattle, does not meet state water quality criteria for primary contact recreation due to high levels of fecal coliform bacteria. Data analysis using ambient monitoring and source inventories identified urban stormwater and nonpoint sources as the primary problem. The Washington State Department of Ecology developed a TMDL for Swamp Creek, including separate loading capacities for the wet season (October–April) and the dry season (May–September) to capture significant variations in in-stream concentrations and expected source loading. Daily dry-season and wet-season loading capacities were calculated at three points in the watershed by multiplying the average seasonal flows by the water quality criteria of 100 cfu/100 mL, representing the allowable 90th percentile concentration. To compare with the loading capacities and identify necessary load reductions, existing loads were estimated by multiplying the same season average flows by the observed 90th percentile bacteria concentration based on data collected at the respective station. The Simple Method was used to estimate the relative stormwater loading from each MS4 to assign WLAs to the multiple MS4s in the watershed. WLAs were then assigned on the basis of the total loading capacity and each MS4's proportional loading contribution at that station. Washington's Swamp Creek TMDL is at www.ecy.wa.gov/biblio/0610021.html.

4.3.2. Waterbody-based Approaches

Waterbody-based approaches rely on calculating an overall in-stream load, sometimes reflecting drainage areas with multiple sources. Therefore, it is necessary to use some supplementary analysis to distribute the calculated loading capacity among the identified sources, including permitted stormwater sources. To divide a cumulative load among watershed sources, it is necessary to gain a general understanding of the relative magnitude of the sources. The source characterization discussed in Chapter 3 should provide a TMDL writer with enough information to identify the sources of concern and at least generally delineate their location. The TMDL writer should be able to list the sources requiring LAs and WLAs and should know what data or information is available to characterize that source. For example, are there outfall or stormwater monitoring data for any of the stormwater sources? If so, such data (e.g., flow and concentration) can be evaluated and used to calculate a representative load attributed to the source. Or can the approach (e.g., load duration) be applied at a location that represents a drainage area from only one source? If so, the calculations at this point can be allocated to that individual source.

With any of the waterbody-based approaches, if stormwater source monitoring data are available, the TMDL writer should try to incorporate the data to most accurately represent the source inputs and calculate existing loads and subsequently distribute allowable loads. For example, storm event sampling can be used to estimate source loads, either through collecting data at major stormwater outfalls or through ambient monitoring at key locations representative of certain land use categories. However, monitoring data are not always available to characterize the discharge characteristics of individual sources. In such cases, common methods used to divide the total load into WLAs for stormwater include consideration of a stormwater source regulated area, jurisdictional area, land use, or IC:

- *Stormwater regulated boundary:* loading capacity is allocated to permitted stormwater sources (and other land-based sources) based on the proportion of the total drainage area they represent. For

example, if the loading capacity is 100 lbs/day and an MS4 conveyance system drains and transports runoff from 20 percent of the area draining to the assessment location, the MS4 WLA is specified as 20 lbs/day. To use this approach, it is necessary to be able to delineate the area draining to the source's stormwater conveyance system. Otherwise, an alternate estimate of the stormwater source's *drainage* area can be used, such as jurisdictional area. (For information on delineating the area of a stormwater source, see Chapter 3.)

- *Jurisdictional area:* loading capacity is allocated to permitted stormwater sources (and other land-based sources) on the basis of the portion of the drainage area included within their physical boundary. Without knowing the specific area draining to a stormwater conveyance system, the stormwater source area can be represented by the jurisdictional or operational area of the source (e.g., urbanized area for an MS4). For example, if the loading capacity is 100 lbs/day and the *urbanized area* of an MS4 represents 30 percent of the area draining to the assessment location, the MS4 WLA is specified as 30 lbs/day.
- *Land use:* loading capacity is allocated to permitted stormwater sources on the basis of expected land use unit area loads derived from literature values. For example, if the loading capacity is 100 lbs/day and an MS4 is estimated to contribute 25 percent of the load on the basis of the land uses within its boundary, the MS4 WLA is specified as 25 lbs/day.

> ***Resources:*** For more information on obtaining land use and coverage information, refer to the Resources list at the end of Chapter 3 in Sections 3.4.6 and 3.4.7.

- *IC:* loading capacity is allocated to permitted stormwater sources on the basis of the proportion of the drainage area they represent modified to reflect the amount of IC.

While the issue of how to distribute the cumulative loading capacity among sources is relevant to all the waterbody-based approaches, the following discussion identifies some issues and considerations specific to each approach.

4.3.2.1. Receiving Water Models

> ***Resources:*** For more information on selecting receiving water models based on needs for a given TMDL, refer to the Resources list at the end of this chapter in Section 4.5.4.

In some situations, the TMDL writer might use receiving water models alone to support TMDL development. Receiving water models differ from watershed models in that they only represent conditions within a receiving water, such as a stream or reservoir. Land-based contributions are typically addressed through designation of boundary conditions (which are often based on monitoring data) or through development of a separate watershed model. While these models provide many benefits for water column analysis, they pose limitations for stormwater allocation when applied independently from a land-based loading or watershed model. The inherent limitation is that they do not explicitly represent land-based sources (i.e., land units). This limitation is most pronounced when only limited geographical data are available for regulated MS4s, industrial facilities, and construction sites.

In situations where detailed geographic data are available, they can potentially provide a level of stormwater allocation commensurate with that of a watershed model application. Receiving water models are robust in their ability to provide a high level of detail laterally, vertically, and longitudinally. They can represent a stream, lake, or estuary using numerous analytical elements—in some cases tens of thousands. Thus, model predictions can be very accurate at many locations along the length of a receiving water. With this capability, receiving water models can be used to most accurately determine

the specific amount of a pollutant that can enter a receiving water at different locations while still attaining and maintaining water quality criteria throughout. Thus, allocations can potentially be made at the very detailed stormwater discharge level. This assumes that very detailed stormwater discharge location (i.e., outfall) and contribution (flow and contaminant levels) are available to support the receiving water analysis. Without this level of detail, a receiving water model is limited.

In practice, TMDLs employing receiving water models often also employ a watershed model to support source-based allocations, including those to regulated stormwater sources.

4.3.2.2. Load Duration Approach

TMDLs developed using the load duration approach most often identify the portion of the loading capacity for the stormwater WLA(s) on the basis of jurisdictional area. However, because the duration curve framework establishes a series of individual flow-variable loading capacities, the portion of each loading capacity attributed to individual sources typically will also vary by flow. Figure 19 illustrates a TMDL that was developed using a duration curve framework. WLAs are specified for municipal treatment plants that reflect NPDES permit limits. In the case of Figure 19, these WLAs are based on technology-based effluent limits at facility design flows. The treatment plant WLAs are constant across all flow conditions and ensure that water quality standards will be attained. WLAs are also identified for MS4s, which reflect increased loads under higher flow conditions. In the Figure 19 example, stormwater WLAs for MS4 communities are based on the percent jurisdictional area approach. In this case, 3 percent of the watershed falls within the jurisdiction of MS4 communities. Thus, the MS4 WLA is 3 percent of the available allocation for each flow zone. The remaining 97 percent is designated for nonpoint sources and natural background as the LA for each zone.

> ***Resources:*** For more information on the load duration approach, refer to the Resources list at the end of this chapter in Section 4.5.5.

Because a load duration curve establishes a flow-variable loading capacity, the framework allows for source-specific allocations to be adjusted by flow zone. To target loading controls and put the load duration results in a more *digestible* format, the load duration curve is usually divided into different flow zones representing different conditions (e.g., low flow, high flow). Representative existing loads and allowable loads can then be identified for each of those intervals. Because some sources tend to produce pollutant loads and affect the stream under certain flow conditions, this can help to distribute the allowable load among expected sources specific to a flow zone. This can account for different source areas and delivery mechanisms that might dominate under different flow conditions. For example, some TMDLs developed using the load duration approach allocate WLAs to stormwater sources for only certain flow zones (e.g., a WLA of zero is specified for the low-flow zone under the assumption that no load is generated from this source during those periods; see Table 10 for example). During the characterization activity discussed in Chapter 3, the TMDL writer should have an understanding of the types of stormwater sources and under what conditions they are affecting the stream. Within the load duration framework, allocations within the TMDL can be set in a way that reflects dominant concerns associated with appropriate hydrologic conditions.

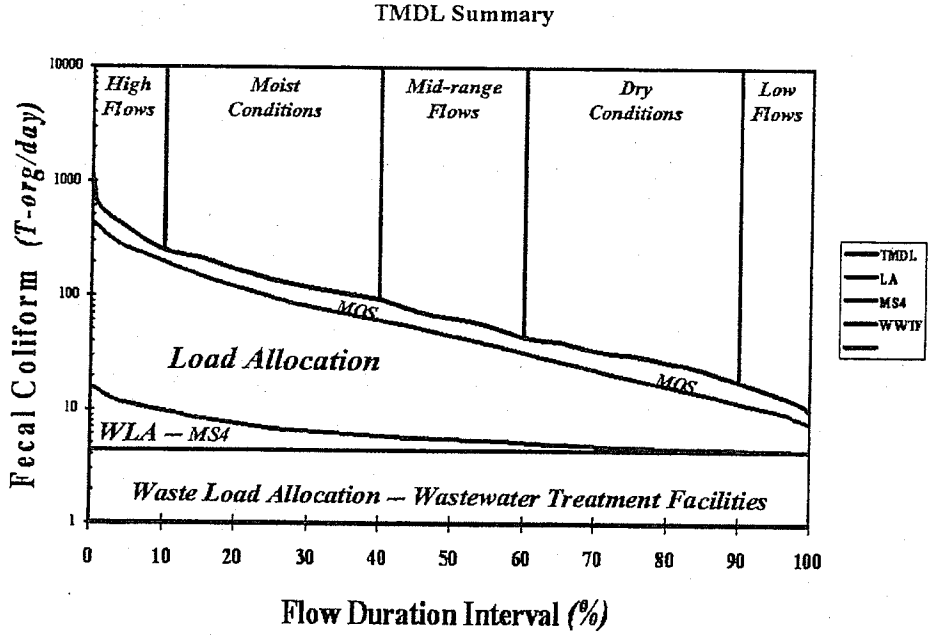


Figure 19. Example TMDL using duration curve framework

Table 10. Example summary of allocations calculated for a TMDL using the load duration framework

Name	TMDL Component	Duration Curve Zone (Phosphorus expressed as pounds/day)				
Redrock River—Phosphorus		High	Moist	Mid	Dry	Low
	TMDL	19.93	10.84	8.53	6.53	3.44
	MOS	5.63	1.47	0.72	0.57	0.43
	LA	11.79	7.62	6.28	4.72	2.59
Doughton (WWTP)	WLA	0.38	0.38	0.38	0.38	0.38
Guilaine (Industrial)	WLA	0.04	0.04	0.04	0.04	0.04
Doughton (MS4 / Phase 1)	WLA	1.39	0.89	0.74	0.55	0.00
Westerbridge (MS4 / Phase 2)	WLA	0.49	0.31	0.26	0.19	0.00
Thompath (MS4 / Phase 2)	WLA	0.21	0.13	0.11	0.08	0.00
Stormwater Source Areas of Concern		CSOs				
		Riparian Areas				
		Impervious Surfaces				
				Illicit Discharges		

4.3.2.3. Percent Reduction Method

The Percent Reduction method typically involves comparing ambient water quality data to applicable water quality criteria to identify a necessary percent reduction in observed concentrations to meet WQS. That percent reduction is then applied to an *existing* load to calculate the loading capacity. Depending on how the existing loads were calculated, that analysis can help to support distributing the loading capacity among the sources and identifying any stormwater WLAs. For example, if the existing load is based on export coefficients or literature values for watershed land uses or sources, the TMDL writer will already

have calculated the source-specific existing loads and can target percent reductions to individual sources to meet the overall loading capacity goal. If the existing load did not include specific calculation for stormwater sources, it will be necessary to use one of the approaches discussed previously to distribute the loading capacity (e.g., source drainage area, jurisdictional area) into LAs and WLAs.

4.3.2.4. Mass Balance or Steady-State Analysis

Like the Percent Reduction method, applying a mass balance or steady-state analysis to calculate a loading capacity relies on some calculation of the incoming existing pollutant load. This might be done by *back-calculating* an existing load on the basis of observed concentrations and stream flow (or volume for lakes and reservoirs) and accounting for any expected losses (e.g., die-off, settling). If this is the case, the existing load represents a cumulative load from all the sources contributing to the pollutant of concern. If there are no data available to directly calculate loads from individual sources, the most likely approach for distributing the loading capacity and identifying stormwater WLAs will be to use some measure of source area (e.g., jurisdiction, drainage area) as discussed previously. Another option for calculating the existing load for a mass-balance analysis is the use of export coefficients. Similar to the Percent Reduction method, this would produce source-specific existing loads that could be multiplied by an estimated load reduction to calculate LAs and WLAs that meet the overall loading capacity.

4.4. Categorizing WLAs for Stormwater Sources

This section provides a description of the various ways that TMDL writers can categorize and assign WLAs to permitted stormwater sources. The manner in which TMDL writers choose to calculate the WLAs for permitted stormwater sources can vary depending on data availability and quality, stormwater source characteristics, and permit implementation considerations. Four basic options for categorizing stormwater source WLAs include the following:

1. Aggregated for all stormwater sources (i.e., one overall WLA that represents total allocation to all MS4s, construction activities, and industrial facilities)
2. Aggregated by each type of stormwater source (i.e., one WLA for all permitted MS4s; one WLA for all permitted construction activities; one WLA for all permitted industrial facilities)
3. Individual by each stormwater source
4. Individual by each outfall

It is important to note that the four categories listed above are just basic options for presenting allocations within the TMDL. They do not represent all possibilities. TMDL writers can consider using one or more of these options in concert within a TMDL for various types of stormwater sources. In addition, TMDL writers can further refine these basic options using spatial and temporal considerations to make the allocations more meaningful to stormwater sources. For example, a TMDL writer could present individual or aggregated WLAs for sources by subwatershed or by land cover category. If the WLA has temporal variations, a TMDL writer could further refine the WLAs by flow conditions (i.e., wet versus dry), months, or seasons.

> ***Tip: Refining allocations using spatial and temporal considerations***
>
> TMDL writers can consider further refining any of the four basic categories of stormwater source WLAs using spatial and temporal considerations. Spatial considerations can include jurisdictional boundary, subwatershed boundary, or land cover. Temporal considerations can include wet seasons versus dry condition (based on flow), seasonally, or monthly.

WLAs that reflect the way that stormwater sources implement their respective SWMPs and SWPPPs are likely to be more *user-friendly* than WLAs that do not closely align with how stormwater sources manage their programs and plans. The more detailed and refined the allocation, the easier it will be for permit writers to translate through the permit and for stormwater sources to implement through by complying with permit requirements. The goal is to ultimately develop WLAs that are accurate, equitable, and implementable.

The details of each basic categorization option are discussed below. Table 11 summarizes advantages and disadvantages associated with the four basic options for categorizing and assigning WLAs to stormwater sources. Where available, examples illustrate how states and EPA have used each categorization approach. The Appendix of this Handbook contains additional examples of categorization approaches for WLAs.

Table 11. Options for assigning WLAs to stormwater sources

Option	Advantages	Disadvantages
Single Aggregated WLA for All Permitted Stormwater Sources *Example: Lake Champlain (Vermont) Phosphorus TMDL (2002)*	▪ Requires fewer permitted stormwater source characterization data to calculate ▪ Requires fewer resources to calculate ▪ Allows use of less complex WLA development approaches ▪ Allows permitted stormwater sources to determine at the local level how to further subdivide the overall allocation without specific commitments that could translate into permit requirements ▪	▪ More difficult to implement in permits ▪ Requires permit writers or sources to conduct further analyses to disaggregate the overall WLA to individual sources ▪ Potentially overlooks pollutant load contributions from all types of permitted stormwater sources throughout the watershed ▪ Does not promote individual permitted stormwater source accountability for pollutant load reductions to implement the WLA ▪ More potential to capture unpermitted stormwater sources (i.e., urban nonpoint source runoff) in the aggregated WLA
Separate Aggregated WLA for Types of Permitted Stormwater Sources *Examples:* ▪ *Potomac Direct Drain (West Virginia) Sediment TMDL* ▪ *Charles River (Massachusetts) Pathogen TMDL* ▪ *Shingle Creek (Minnesota) Chloride TMDL* ▪ *Columbia Slough (Oregon) TMDLs*	▪ Requires less permitted stormwater source characterization data to calculate but allows for specificity within each category of permitted stormwater sources ▪ Requires fewer resources to calculate ▪ Allows use of less complex WLA development approaches ▪ Allows permitted stormwater sources within a specific category to determine at the local level how to further subdivide the overall allocation without specific commitments that could translate into stormwater permit requirements ▪	▪ Does not result in equitable and easy-to-understand (i.e., implementable) WLAs for permit writers or stormwater sources ▪ Requires permit writers or stormwater sources to conduct further analyses to identify sources that will implement the WLA ▪ Does not promote individual permitted stormwater source accountability for pollutant load reductions to implement the overall WLA ▪ Potential for double-counting pollutant load reductions where categories of stormwater sources might overlap (e.g., MS4s with permitted construction activities that a TMDL writer could assign under the aggregated MS4 WLA or under the aggregated construction WLA

Option	Advantages	Disadvantages
WLAs to Each Individual Stormwater Source *Examples:* ▪ *Columbia Slough (Oregon) Lead TMDLs* ▪ *Wissahickon Creek (Pennsylvania) Siltation TMDL* ▪ *Swamp Creek (Washington) Pathogen TMDL* ▪ *Potomac Direct Drain (West Virginia) Sediment TMDL*	▪ Promotes transparency and accountability in TMDL implementation ▪ Provides permit writers enough information to include reasonable provisions in relevant permit(s) ▪ Allows permitted stormwater source to understand specific pollutant load reduction responsibility and take steps to analyze overall SWMP or SWPPP to achieve reduction ▪ Promotes following regulatory boundaries (e.g., regulated MS4 boundary) that are familiar to permitted stormwater sources and used to develop and implement SWMPs and SWPPPs	▪ Has the potential to add time to the overall TMDL development process if each permitted stormwater source has concerns related to the separate WLA assigned to its respective regulated MS4, industrial facility, or construction site ▪ Requires data and information specific to each permitted stormwater source, depending on the WLA development approach selected by TMDL writers (e.g., specific regulatory boundaries for each permitted stormwater source)
Individual WLAs on an Outfall Basis *Example: Middle Rio Grande (New Mexico) Fecal Coliform TMDL (2002)*	▪ Provides permit writers with detailed information to develop tailored permit provisions, particularly for individual permits ▪ Allows stormwater sources to target implementation efforts to address a specific area represented by a stormwater discharge from a specific outfall	▪ Requires data and information pertinent to each outfall addressed by the TMDL analysis ▪ Requires comprehensive spatial understanding of a permitted stormwater source area, including a detailed system map with location of all outfalls, and surrounding land uses ▪ Might not be feasible in watersheds with a large number of permitted stormwater sources, particularly permitted MS4s that might have a large number of outfalls draining the system ▪ Does not align with how many permitted stormwater sources approach SWMP and SWPPP implementation (i.e., focus on systemwide approach as opposed to an outfall-by-outfall approach)

4.4.1. Single Aggregated WLA for All Stormwater Sources

When data and resources to develop a refined characterization of sources are extremely limited, the ability of TMDL writers to analyze and identify the pollutant load contributions from each type of source is also limited. As a result, the TMDL writer might opt to group all stormwater sources into one category and assign one all allocation to all stormwater sources in this generalized category.

Although this approach alleviates some technical complexities for TMDL writers, the lack of specificity associated with this approach can result in a lack of transparency and accountability that can create implementation challenges for permit writers and sources. TMDL writers can mitigate some of the challenges by considering and addressing them at the outset of WLA development. To ensure that the single aggregated WLA promotes transparency and accountability, it is essential to generate a comprehensive inventory of all permitted stormwater sources represented under the single WLA as a means to help (1) stakeholders and EPA reviewers ensure that the WLA considers all relevant stormwater sources in the watershed boundary (2) permit writers to incorporate reasonable and clear provisons into the relevant permit(s), and (3) stormwater sources understand who has a responsibility to help conduct implementation activities to implement the WLA. As discussed in Chapter 3, Characterizing Impairments and Stormwater Sources, it is important that the TMDL writer has a comprehensive understanding of the type, number, and location of stormwater sources within the watershed boundary. The TMDL document should clearly identify all stormwater sources addressed by

the single aggregated WLA. As with all WLAs, the TMDL writer should also document other assumptions used to generate the single aggregated WLA. Assumptions might include the following:

- The analysis used municipal jurisdictional boundary versus the actual MS4 boundary that defines the permitted area
- The analysis assumes that all construction sites within the boundary selected to represent the MS4 (i.e., jurisdictional boundary or actual MS4 boundary) are the responsibility of regulated MS4s and fall under the MS4 allocation, not a separate construction allocation

Tips for Using a Single Aggregated WLA for All Permitted Stormwater Sources

- Create a comprehensive inventory of all permitted stormwater sources within the watershed boundary and document this inventory in the WLA assumptions
- Indicate which permitted stormwater sources are part of the single aggregated WLA and provide rationale
- Consider providing guidance to permitted stormwater sources on ways to further sub-allocate the single aggregated WLA to promote equity and accountability in implementation strategies and approaches
- Provide rationale for using this approach versus other approaches that assign WLAs to more narrowly defined categories (e.g., limited available data, limited TMDL development resources, desire to promote flexibility)
- Highlight any plans to revisit and revise the single aggregated WLA based on future data availability

Under this approach, permit writers or stormwater sources captured in the single aggregated WLA likely will need to conduct further analyses to make sub-allocations to each source; therefore, it is important that the TMDL document clearly identifies which stormwater sources are included in the single aggregated WLA. While it is possible to use single aggregated WLAs for stormwater sources in TMDLs, this approach is not preferred because of the associated implementation challenges. To avoid using this approach, TMDL writers can work with permit writers and stormwater sources to collect the additional data necessary to disaggregate allocations and assign to specific types of stormwater sources or, ideally, individual sources.

4.4.2. Separate Aggregated WLA for Each Type of Permitted Stormwater Source

This approach is an option for the TMDL writer to consider when the data are available to identify and separate the general pollutant load contributions from each type of permitted stormwater source, but source-specific information is not available to support accurate individual source allocations. For example, the TMDL writer might have a complete inventory of industrial facilities within the watershed boundary compiled from data obtained from a Phase I MS4 required to maintain an inventory of regulated industrial facilities (for permitted industrial facilities within the regulated MS4 boundary) and from a state or EPA Regional Office database of industrial facilities covered by individual or general industrial stormwater permits (for permitted industrial facilities outside the regulated MS4 boundary but within the watershed boundary). Although the TMDL writer has compiled a comprehensive inventory of the location and number of permitted industrial facilities, more information would be necessary on facility-specific processes and practices to estimate the pollutant load contribution from each facility. In such a case, the TMDL writer can use a general set of assumptions about the inventory of industrial facilities, such as the aggregate land area occupied by all industrial facilities and the location of these facilities within the watershed boundary (to determine soil type, perviousness, proximity to receiving waterbody) to calculate an aggregated.

Tips for Using Separate Aggregated WLA for Each Type of Permitted Stormwater Source

- Create a comprehensive inventory of all permitted stormwater sources within the watershed boundary under each category of stormwater sources and document this inventory by category in the WLA assumptions
- Indicate which permitted stormwater sources are included under each permitted stormwater source category of the separate aggregated WLA for each category and provide decision criteria to ensure consistency and clarity (e.g., all separately permitted construction sites in and outside regulated MS4 boundaries should be represented in the aggregated construction WLA; all separately permitted industrial facilities in and outside of regulated MS4 boundaries should be represented in the aggregated industrial WLA; only stormwater discharges from within the regulated MS4 boundary should be represented in the aggregated MS4 WLA)
- Provide guidance to permitted stormwater sources on ways to further sub-allocate the separate aggregated WLA for each stormwater source category to promote equity and accountability in implementation strategies and approaches
- Provide rationale for using this approach versus other approaches that assign WLAs to more narrowly defined categories (e.g., limited available data, limited TMDL development resources, desire to promote flexibility for purposes of implementation)
- Highlight any plans to revisit and revise the separate aggregated WLAs for each stormwater source category and under what circumstances (e.g., availability of better data or additional resources)

In Practice: Approaches and Rationale for Developing and Assigning Separate Aggregated WLAs for Specific Types of Stormwater Sources in West Virginia, Massachusetts, Minnesota, and Oregon

TMDL writers might decide to develop and assign separate aggregated WLAs for specific categories of stormwater sources based on a variety of factors, such as data availability, links to other TMDLs, or implementation considerations. Three TMDLs that assign separate aggregated WLAs for categories of stormwater sources include the Potomac Direct Drain (West Virginia) Sediment TMDL, the Charles River (Massachusetts) Pathogen TMDL, and Shingle Creek (Minnesota) Chloride TMDL. A brief description of the approach and rationale for developing and assigning stormwater source WLAs under each TMDL is provided below.

Potomac Direct Drain (West Virginia) Sediment TMDL (www.wvdep.org/alt.cfm?asid=140)

This TMDL addresses construction activities in tributaries of the Potomac River in Berkeley and Jefferson counties, West Virginia. The TMDL provides allocations for 297 active and pending construction sites registered under the West Virginia CGP. The main TMDL report provides an aggregated WLA for construction activities by subwatershed. In addition, the TMDL's appendices provide individual WLAs for each impending and active construction site.

Charles River (Massachusetts) Pathogen TMDL (www.mass.gov/dep/water/resources/tmdls.htm#charles)

According to the final TMDL, all 35 communities in the Charles River watershed have stormwater permit coverage under the Phase I and Phase II MS4 Stormwater program (34 are covered under Phase II, and one is covered under Phase I). The TMDL addresses stormwater runoff from Phase I and Phase II as a pathogen source and assigns two WLAs toall MS4s—one for each type of surface water classification—as daily concentration targets. In addition, the TMDL expresses WLAs for stormwater as a daily load (i.e., colonies/day) using flow data from the fraction of the watershed that has IC; areas with pervious cover are considered nonpoint source runoff and accounted for under the LA. WLAs expressed as daily loads for stormwater runoff from Phase I and Phase II also includes contributions from combined sewer overflows and are presented on a segment-by-segment basis.

Shingle Creek (Minnesota) Chloride TMDL (www.pca.state.mn.us/water/tmdl/project-shinglecreek-chloride.html)

The Shingle Creek Chloride TMDL addresses chloride contributions from road deicing activities by nine municipalities, one county, and the Minnesota Department of Transportation that have road maintenance

responsibilities within the Shingle Creek watershed. All these entities are MS4s. Under this TMDL, the MS4s received one aggregated WLA in the form of a percent reduction. (It is important to note that the WLA also addressed road salt storage facilities, private application, and residential chloride sources.) These permitted stormwater sources worked together through the Shingle Creek Watershed Commission to develop an implementation plan to meet the overall percent reduction target. The approach of assigning a single aggregated WLA for permitted stormwater sources in the regulated MS4 category allowed for a more flexible approach to implementation. Per the Shingle Creek Chloride Implementation Plan, working collectively to achieve the overall percent chloride load reduction allowed the entities with permitted MS4s to allocate load reductions to meet the percent reduction target on the basis of unique factors such as financial constraints, feasibility limitations, and public concerns and perceptions.

Columbia Slough (Oregon) TMDLs
(www.deq.state.or.us/wq/TMDLs/docs/willamettebasin/columbiaslough/tmdl.pdf)

The TMDLs developed for the Columbia Slough include WLAs for industrial facilities and MS4s to address numerous parameters including dissolved oxygen, phosphorus, bacteria, and lead. To address the pollutant load reductions needed from stormwater sources, the TMDLs for 5-day biochemical oxygen demand (BOD_5) and lead group together the two MS4s in the Columbia Slough basin into an MS4 category and the industrial facilities with permitted stormwater discharges into an industrial category.

4.4.3. Individual WLAs for Each Permitted Stormwater Source

TMDL writers can develop and assign WLAs for each stormwater source within the impaired waterbody's watershed boundary. Although this approach might require additional data, it can facilitiate the implementation of permits and is ideal for permitted stormwater sources that want to know their specific pollutant load reduction responsibility without the need for negotiating with other permitted stormwater sources to further allocate pollutant load reductions. In some instances, depending on data availability, TMDL writers might have the ability to assign individual WLAs to specific permitted stormwater sources under a category of permitted stormwater sources (e.g., each MS4, each industrial facility), but might find that data limitations require the use of aggregated WLAs for other permitted stormwater sources (e.g., all active construction sites). This approach has the potential to allow each permitted stormwater source, and other interested stakeholders, to more closely review and analyze the technical approach for WLA development, including the specific assumptions used to generate the individual WLA. It also provides more of a direct nexus between the WLA and stormwater permit requirements that must contain conditions consistent with the requirements and assumptions of the WLA, thus promoting more accountability and a more clearly defined expectation with regards to implementation. Individual WLAs also provide a foundation for transparent and accountable watershed-based trading because each permittee has its own WLA (which is enforceable through a permit), and the WLAs are available to all potential trading partners to review.

Tips for Using WLAs Assigned to Each Permitted Stormwater Source

- Provide clear description of assumptions and information used to calculate the WLA for each permitted stormwater source
- Ensure that permitted stormwater sources listed in the TMDL source characterization links to the list of permitted stormwater sources assigned a WLA to ensure transparency and equity
- Provide information on estimated baseline pollutant load contributions from each permitted stormwater source to help sources understand the required pollutant load reduction
- Consider additional methods for presenting the WLA that will support implementation based on understanding of existing SWMP and SWPPP approaches (e.g., breaking down total WLA for each permitted stormwater source on a subwatershed basis)

In Practice: Approaches and Rationale for Developing and Assigning Separate WLAs for Individual Stormwater Sources in Oregon, Pennsylvania, Washington, and West Virginia

Columbia Slough (Oregon) TMDLs
(www.deq.state.or.us/wq/TMDLs/docs/willamettebasin/columbiaslough/tmdl.pdf)

The lead TMDL developed for the Columbia Slough includes an aggregated WLA for the industrial permitted area and provides an approach for these industrial facilities to calculate their individual allocation. The approach involves calculating individual industrial facility allocations on a unit-area basis for each flow condition. While the TMDL does not contain specific individual WLAs for each industrial facility, the TMDL provides the equation necessary for each facility to calculate the load specific to its site.

Wissahickon Creek (Pennsylvania) Siltation TMDL
(www.epa.gov/reg3wapd/tmdl/pa_tmdl/wissahickon/index.htm)

This TMDL calculated WLAs for 16 permitted MS4s (defined by municipal boundaries, as opposed to regulated MS4 boundaries, for purposes of this TMDL) using land-use-specific, unit-area loads determined in modeling analysis for specific regions of the Wissahickon Creek basin, as well as the streambank erosion within each municipality. TMDL writers divided the Wissahickon Creek watershed into five main subwatersheds to match the impaired watershed with the smaller reference watershed used in the analysis. Sediment loads were estimated for each of the five subwatersheds and then distributed among municipalities as MS4 stormwater WLAs for each individual 303(d)-listed watershed. The WLA assigned to each of the 16 permitted MS4s accounted for both overland flow and streambank erosion. The final TMDL report presented a summary table that presented the existing load, the WLA, and the associated percent reduction to implement the WLA for both overland flow and streambank erosion, as well as the total WLA, for each permitted MS4. Appendix G of the final TMDL report also presents this information for each permitted MS4 on a subwatershed basis, allowing permitted MS4s to see and understand WLA information in both formats.

Swamp Creek (Washington) Pathogen TMDL (www.ecy.wa.gov/biblio/0610021.html)

This TMDL estimated the relative bacteria loading from each MS4 permit holder (i.e., the permit holder's jurisdictional boundary, not necessarily the loading from the actual MS4 boundary) using the Simple Method and assigned WLAs to MS4s at each water quality monitoring station on the basis of their proportional contribution at that station and the bacteria criterion needing the greatest reduction. Each MS4 is required to achieve a percent reduction of the loading capacity at each TMDL compliance point according to the estimated contribution from the MS4 permit holder.

Potomac Direct Drain (West Virginia) Sediment TMDL (www.wvdep.org/alt.cfm?asid=140)

Although the main body of the TMDL report provides an aggregated WLA for construction sites, the TMDL's appendices provide individual WLAs for each impending and active construction site. The individual WLAs are provided on a subwatershed basis. This TMDL covers approximately 297 active and pending construction sites registered under the West Virginia CGP in tributaries of the Potomac River within Berkeley and Jefferson counties, West Virginia.

4.4.4. Individual WLAs on an Outfall Basis

Stormwater permits require permitted stormwater sources to develop maps of regulated MS4s, industrial facilities, and construction sites that include locations of stormwater outfalls. Permitted stormwater sources are required to map the location of stormwater outfalls, and with increasing frequency, this information is available. It is still possible that some stormwater sources might not have the information necessary to develop and assign WLAs on an outfall-by-outfall basis. However, for those stormwater sources that do have adequate data, TMDL writers can consider the feasibility and benefits of assigning individual WLAs to specific outfalls. For example, if a TMDL addresses pathogens during dry-weather flow from a high-priority area within the boundary of a regulated MS4 (i.e., the system boundary), an individual WLA for specific outfalls within the high-priority area could be more useful in terms of supporting implementation than a WLA assigned to the entire MS4.

Tips for Using Individual WLAs on an Outfall Basis

- Use where information about the permitted stormwater source and watershed conditions indicate that an outfall approach is not only feasible, but would be supported through SWMP and SWPPP implementation (e.g., few known outfalls that allow permitted stormwater sources to isolate and track implementation activities associated with changes in discharge pollutant loads at each outfall)
- Ensure that permitted stormwater source has up-to-date information about outfall locations
- Ensure that an outfall-by-outfall approach is feasible for the TMDL development process
- Ensure that effectiveness monitoring is required in relevant permits, as appropriate, on an outfall-by-outfall basis

In Practice: Developing and Assigning WLAs to Individual Outfalls Under the Middle Rio Grande, New Mexico, Fecal Coliform TMDL (2002)

The Middle Rio Grande fecal coliform TMDL established that stormwater conveyances are the primary sources of fecal coliform loading to the Middle Rio Grande. Specifically, the TMDL report identifies four discrete concrete transports of stormwater contributing to fecal coliform loads and assigns a WLA to these four conveyances. The city of Albuquerque is responsible for implementing the WLAs assigned to these four stormwater conveyances through its MS4 SWMP. The TMDL is at www.nmenv.state.nm.us/SWQB/Middle_Rio_Grande-Fecal_Coliform_TMDL-May2002.pdf

In Practice: Using Multiple Approaches to Categorize Stormwater Source WLAs in the Los Angeles River Metals TMDL (2007)

The Los Angeles River Metals TMDL categorizes stormwater source WLAs using a variety of options to help permitted stormwater sources meet both dry-weather and wet-weather targets for cadmium, copper, lead, zinc, and selenium in impaired reaches of and tributaries to the Los Angeles River.

For dry weather, the TMDL provides single aggregated WLAs for all permitted stormwater sources on a subwatershed basis for three pollutants—copper, lead, and zinc. The permitted stormwater sources included in the single aggregated dry-weather WLAs include Los Angeles County MS4, Long Beach MS4, Caltrans, industrial facilities subject to the general industrial stormwater permit, and construction activities subject to the CGP. However, per the TMDL, industrial facilities and construction activities received a WLA of zero for dry weather, so only those entities subject to MS4 permit requirements share the single aggregated dry-weather WLAs for copper, lead, and zinc in the six reaches of the Los Angeles River and the seven tributaries.

For wet weather, the TMDL presents single aggregated WLAs for cadmium, copper, lead, and zinc that apply to all reaches and tributaries. In addition to providing single aggregated WLAs for each of these pollutants, the TMDL breaks down the overall WLAs into different stormwater source categories "by their percent area of the portion of the watershed served by storm drains." Under this approach, the TMDL assigns separate aggregated WLAs to MS4s (i.e., Los Angeles County and Long Beach MS4s), Caltrans, industrial facilities covered by the industrial general permit, and construction sites covered by the CGP. In addition to separate aggregated WLAs, the TMDL states that each permitted industrial facility and construction site will receive individual WLAs per acre on the basis of the total acres of their facility.

The TMDL is available at www.swrcb.ca.gov/rwqcb4/water_issues/programs/tmdl/tmdl_list.shtml.

4.4.5. Other Elements in a TMDL

Regulation and guidance require that all TMDLs include minimum elements. In addition to the elements already discussed in previous chapters (water quality standards, loading capacity, WLAs, LAs), a TMDL must also include a MOS, seasonal variation, and daily loads, In addition EPA recommends that TMDLs include allocations for future growth and reasonable assurance. The process or decisions related to including these elements in a TMDL might not vary when stormwater sources are involved. However, TMDL writers should consider how these other minimum elements might change when addressing stormwater sources in the analysis. Summarized below is each additional minimum element and, where appropriate, the stormwater-specific considerations related to the minimum element.

> ***Resources:*** For more information on the required elements of a TMDL, refer to the Resources list at the end of this chapter in Section 4.5.7.

- **MOS.** MOS must be included in a TMDL to account for any lack of knowledge concerning the relationship between allocations and water quality. The MOS may be implicit, incorporated into the TMDL through conservative assumptions in the analysis, or explicit, expressed in the TMDL as loadings set aside for the MOS.
- **Seasonal Variation.** TMDLs must be developed with a consideration of seasonal variation in the analysis. As discussed in Section 4.3, TMDLs addressing stormwater sources are likely to have seasonal variations related to wet and dry seasons included in the analysis.
- **Reasonable Assurance.** For TMDLs developed for waters affected by a mix of point sources and nonpoint sources, the TMDL should include reasonable assurance that nonpoint source control measures can achieve expected load reductions. TMDLs addressing stormwater sources often use this element to describe the NPDES permit requirements that apply to MS4s, industrial facilities, and construction activities included in the analysis.
- **Future Growth.** TMDLs can also include allocations for future nonpoint and point sources, acting as a reserve for future sources. This minimum element is particularly important to stormwater sources that are intermittent. For example, construction activities might obtain permit coverage and commence after developing a TMDL or an industrial facility might no longer certify to a condition of no exposure and require permit coverage. These types of stormwater sources would need to implement WLAs from the future growth allocation.
- **Daily Load.** TMDLs should include allocations expressed in terms of daily time increments. In addition, TMDL submissions can include alternative, non-daily pollutant load expressions (e.g., monthly, annual) to facilitate implementation of the applicable water quality standards.

TMDL writers should consider how to include these minimum elements early in the TMDL development process and evaluate them in context of the major sources, critical conditions, and the chosen TMDL development approach.

4.5. Resources

4.5.1. General TMDL Development

1. USEPA (U.S. Environmental Protection Agency). 1991. *Guidance for Water-Quality-based Decisions: The TMDL Process.* EPA 440/4-91-001. U.S. Environmental Protection Agency, Office of Water, Washington, DC. www.epa.gov/OWOW/tmdl/decisions/

   This guidance document explains the programmatic elements and requirements of the TMDL process as established by CWA section 303(d) and by EPA's Water Quality Planning and Management Regulations (40 CFR Part 130). It discusses the process for developing a TMDL, roles of EPA and the states in the process, and supporting or related water programs.

2. USEPA (U.S. Environmental Protection Agency). 1999. *Protocol for Developing Sediment TMDLs.* EPA 841-B-99-004. U.S. Environmental Protection Agency, Office of Water, Washington, DC. www.epa.gov/owow/tmdl/sediment/pdf/sediment.pdf

   This technical guidance document provides information to support TMDL writers in developing TMDLs for sediment. The document includes information on how to complete each step of the TMDL process, including problem identification, source assessment, linkage of water quality targets and sources, allocation analysis, and monitoring.

3. USEPA (U.S. Environmental Protection Agency). 2000. *Protocol for Developing Pathogen TMDLs.* EPA 841-R-00-002. U.S. Environmental Protection Agency, Office of Water, Washington, DC. www.epa.gov/owow/tmdl/pathogen_all.pdf

   This technical guidance document provides information to support TMDL writers in developing TMDLs for pathogens. The document includes information on how to complete each step of the TMDL process, including problem identification, source assessment, linkage of water quality targets and sources, allocation analysis, and monitoring.

4. USEPA (U.S. Environmental Protection Agency). 2000. *Protocol for Developing Nutrient TMDLs.* EPA 841-B-99-007. U.S. Environmental Protection Agency, Office of Water, Washington, DC. www.epa.gov/owow/tmdl/nutrient/pdf/nutrient.pdf

   This technical guidance document provides information to support TMDL writers in developing TMDLs for nutrients. The document includes information on how to complete each step of the TMDL process, including problem identification, source assessment, linkage of water quality targets and sources, allocation analysis, and monitoring.

4.5.2. Watershed Models

1. USEPA. 2005. *TMDL Model Evaluation and Research Needs.* EPA/600/R-05/149. U.S. Environmental Protection Agency, Office of Research and Development, National Risk

Management Research Laboratory, Cincinnati, OH. www.epa.gov/nrmrl/pubs/600r05149/600r05149.htm

This report documents the review of more than 60 available watershed and receiving water models for their applicability to TMDL development and implementation. It discusses model selection on the basis of model capabilities and provides a series of tables rating the capabilities or applicability the models using the categories of TMDL endpoints, general land and water features, special land processes, special water processes, and application considerations. The document also provides individual fact sheets for each reviewed model.

2. USEPA. 1997. *Compendium of Tools for Watershed Assessment and TMDL Development.* EPA 841-B-97-006. U.S. Environmental Protection Agency, Office of Water, Office of Wetlands, Oceans, and Watersheds, Washington, DC. www.epa.gov/owow/tmdl/comptool.html

This document reviews more than 50 watershed, receiving water and ecological assessment models. The document provides factsheets for each model that describes model components, methods, applications, pollutants addressed, limitations, input data requirements, and type of output. The document also contains information on model selection for specific applications, model calibration, and model verification.

4.5.3. Simple Method

1. Center for Watershed Protection's Web site on the Simple Method: www.stormwatercenter.net. Click "By Category." Information on the Simple Method is included in the *Impacts of Urbanization* category.

4.5.4. Receiving Water Models

1. USEPA. 2005. *TMDL Model Evaluation and Research Needs*. EPA/600/R-05/149. U.S. Environmental Protection Agency, Office of Research and Development, National Risk Management Research Laboratory, Cincinnati, OH. www.epa.gov/nrmrl/pubs/600r05149/600r05149.htm

This report documents the review of more than 60 available watershed and receiving water models for their applicability to TMDL development and implementation. It discusses model selection on the basis of model capabilities and provides a series of tables rating the capabilities or applicability the models using the categories of TMDL endpoints, general land and water features, special land processes, special water processes, and application considerations. The document also provides individual fact sheets for each reviewed model.

2. USEPA. 1997. *Compendium of Tools for Watershed Assessment and TMDL Development.* EPA 841-B-97-006. U.S. Environmental Protection Agency, Office of Water, Office of Wetlands, Oceans, and Watersheds, Washington, DC. www.epa.gov/owow/tmdl/comptool.html

This document reviews more than 50 watershed, receiving water and ecological assessment models. The document provides factsheets for each model that describes model components, methods, applications, pollutants addressed, limitations, input data requirements, and type of

output. The document also contains information on model selection for specific applications, model calibration, and model verification.

4.5.5. Load Duration Curves

1. USEPA (U.S. Environmental Protection Agency). 2007. *An Approach for Using Load Duration Curves in the Development of TMDLs*. EPA 841-B-07-006. U.S. Environmental Protection Agency, Office of Water, Office of Wetlands, Oceans, and Watersheds, Washington, DC. www.epa.gov/OWOW/tmdl/duration_curve_guide_aug2007.pdf

   This document provides an overview on the use of duration curves for TMDLs, describing the basic steps needed to develop duration curves and subsequently identify loading capacities, LAs, WLAs, MOS, and seasonal variations. The guide also discusses some considerations and limitations in using the approach and includes several case examples.

4.5.6. WLA Expression Options

1. Wayland, R.H., and J.A. Hanlon. 2002. *Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs*. Memorandum from Robert H. Wayland, III, Director, Office of Wetlands, Oceans and Watersheds, and James A. Hanlon, Director, Office of Wastewater Management, U.S. Environmental Protection Agency, Washington, DC. www.epa.gov/npdes/pubs/final-wwtmdl.pdf

   This memo clarifies existing EPA regulatory requirements for, and provides guidance on, establishing WLAs for stormwater discharges in TMDLs approved or established by EPA.

4.5.7. Required Elements of a TMDL

1. USEPA (U.S. Environmental Protection Agency). 1991. *Guidance for Water-Quality-based Decisions: The TMDL Process*. EPA 440/4-91-001. U.S. Environmental Protection Agency, Office of Water, Washington, DC. www.epa.gov/OWOW/tmdl/decisions/

   This guidance document explains the programmatic elements and requirements of the TMDL process as established by CWA section 303(d) and by EPA's Water Quality Planning and Management Regulations (40 CFR Part 130).

2. Grumbles, B.H. 2006. *Establishing TMDL "Daily" Loads in Light of the Decision by the U.S. Court of Appeals for the D.C. Circuit in Friends of the Earth, Inc. v. EPA, et al., No. 05-5015, (April 25, 2006) and Implications for NPDES Permits*. Memorandum from Benjamin H. Grumbles, Assistant Administrator. U.S. Environmental Protection Agency, Office of Water, Washington, D.C. www.epa.gov/owow/tmdl/dailyloadsguidance.html

   This memo clarifies EPA's expectations concerning the appropriate tirne increment used to express TMDLs in light of the recent decision by the U.S. Court of Appeals for the D.C. Circuit in Friends of the Earth, Inc. v. EPA, et al., No. 05-5015 (D.C. Cir. 2006), which held that two TMDLs for the Anacostia River did not comply with the CWA because they were not expressed as *daily* loads.

3. USEPA (U.S. Environmental Protection Agency). 2007. *Options for Expressing Daily Loads in TMDLs (Draft)*. U.S. Environmental Protection Agency, Office of Wetlands, Oceans and Watersheds, Washington, D.C. www.epa.gov/owow/tmdl/draft_daily_loads_tech.pdf

   This document provides technically sound options for developing daily load expressions for TMDLs calculated using allocation time frames greater than daily (e.g., annual, monthly, seasonal).

4. Perciasepe, R. 1997. *New Policies for Establishing and Implementing Total Maximum Daily Loads (TMDLs)*. Memorandum from Robert Perciasepe, Assistant Administrator, to Regional Administrators Regional Water Division Directors. U.S. Environmental Protection Agency, Office of Water, Washington, D.C.

   The memo supplements existing regulations and guidance by documenting two policies to establish a nationally consistent approach for establishing and implementing TMDLs. These policies, and will remain in effect unless they are specifically changed by the Office of Water.

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Chapter Five
Promoting Effective Stormwater Management

What's included in this chapter

- ✓ Description of possible stormwater management strategies and techniques for evaluating and selecting appropriate strategies for implementing WLAs.

What you should know after reading this chapter

- ✓ Potential criteria for evaluating and selecting stormwater BMPs most suitable for implementing WLAs.
- ✓ Types of resources, tools, and models available to assist in the selection of appropriate BMPs.

Potential roles and responsibilities under this activity

If you are a TMDL writer

1. Determine if the TMDL can include BMP recommendations for implementing stormwater WLAs.
2. Work with stormwater permit staff and others involved with implementation activities to identify BMPs and associated pollutant load reduction estimates to recommend through the TMDL.
3. Provide technical assistance to stormwater staff in reviewing stormwater management plans and pollution prevention plans that contain BMPs selected to implement WLAs.

If you are a stormwater permit writer

1. Determine if the stormwater permit will include prescriptive BMP implementation requirements in permit(s) based on recommendations in TMDL and work with TMDL staff to develop those BMP recommendations.
2. Determine if the stormwater permit will require stormwater dischargers to identify and implement BMPs necessary to achieve WLAs, but will provide assistance by recommending BMPs to consider or a process for quantifying potential pollutant load reductions.
3. Review stormwater management plans and pollution prevention programs to ensure selected BMPs and associated rationale are technically appropriate for achieving pollutant load reductions.

5. PROMOTING EFFECTIVE STORMWATER MANAGEMENT

TMDLs identify and quantify the loading reductions needed to meet water quality standards and, to the extent possible, facilitate implementation of management measures to implement targeted loading reductions. For stormwater discharges, permittees will reduce loadings in most cases by implementing a suite of structural and nonstructural stormwater BMPs over a certain period of time. Permittees then need to evaluate the effectiveness of BMPs implemented to implement loading reductions, make adjustments where performance was less than expected, and incorporate lessons learned in future BMP implementation activities. In many cases TMDL writers can anticipate an iterative process for making progress toward implementing WLAs and reflect this type of process in the TMDL report. This type of iterative, information-based approach to continuous improvement is often referred to as adaptive management. Through TMDL recommendations and permit requirements, TMDL and permit writers can direct permittees to create SWMPs and SWPPPs that achieve progress toward implementing WLAs over time and demonstrating such progress.

As shown in Figure 20, the step of TMDL implementation involves identifying management options to implement LAs and WLAs. This chapter discusses the activities related to TMDL implementation for stormwater sources. The goal of this chapter is to provide TMDL and permit writers with an understanding of (1) their potential role in developing implementation and adaptive management recommendations and requirements; (2) technical considerations for analyzing and selecting structural and nonstructural BMPs that are suitable for making progress toward implementing a WLA; and (3) technical considerations for monitoring and assessing implementation strategies to implement the WLA.

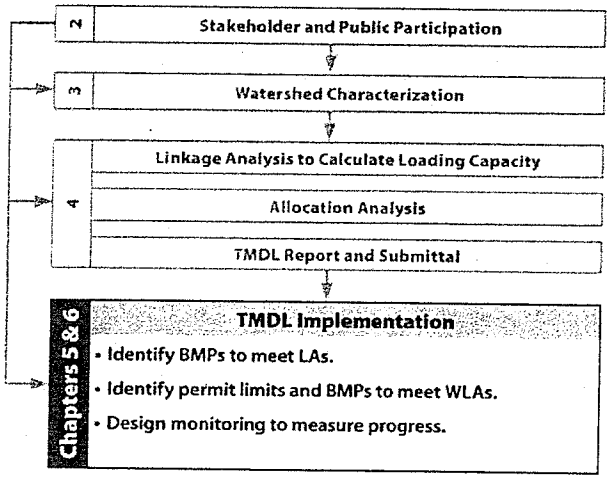

Figure 20. Illustration of the steps in the TMDL process, including activities related to TMDL implementation.

5.1. Implementation Roles and Responsibilities

Implementing TMDLs through stormwater permits will involve planning and coordination. Implementation planning activities might involve TMDL and permit writers or draw on the skills of other agency staff dedicated to implementation related activities. In some instances, implementation planning activities might only involve permittees. As a result, this chapter refers to those engaged in implementation planning activities as *stormwater planners*.

The role of stormwater planners in implementation planning will vary. Potential roles and activities for stormwater planners can include the following:

- **Evaluating and interpreting the WLAs assigned to stormwater sources.** As discussed in Chapter 4, TMDL writers can use a variety of approaches for categorizing and calculating stormwater WLAs in TMDLs. Individual WLAs assigned to each stormwater source or a specific source's stormwater outfall(s) are the most straightforward type of WLAs to interpret and implement. Permit writers can

most directly use individual WLAs and translate them into permit requirements. Stormwater planners should have the ability to conduct implementation planning activities using these refined WLAs. Where TMDL writers use aggregated approaches to categorize WLAs, stormwater sources might need to implement disaggregated WLAs for the purpose of SWMP or SWPPP implementation. Who disaggregates an aggregated WLA might vary—in some instances, it could be the TMDL writer, the permit writer, or even the actual stormwater sources. Stormwater planners can play a role in conducting the activities necessary to refine aggregated WLAs.

- **Developing a recommended list of structural and nonstructural BMPs to include in TMDLs or permits.** If the approach entails providing sources with a narrow suite of BMPs to promote implementation, TMDL and permit writers can play the role of stormwater planners and have the responsibility for analyzing and identifying a suite of BMPs that is most appropriate for addressing the impairment(s) for use by one or more types of sources. Under this option, TMDL and permit writers acting as stormwater planners can coordinate to determine where to list the suite of BMPs—either in the TMDL as recommended BMPs or in the permit as part of the permit requirements. Chapter 6 of this Handbook provides a detailed discussion on options for language to connect BMP implementation recommendations and requirements through TMDLs and permits.
- **Identifying specific structural and nonstructural BMPs when no BMP recommendations or requirements are provided in the TMDL or permits.** If the approach requires sources to analyze and select BMPs on their own, permittees can then act as the primary stormwater planners. Under this option, TMDL and permit writers might focus on providing permittees with technical assistance to assist in BMP selection. As mentioned throughout this Handbook, federal law does not require the development of TMDL implementation plans. Where state regulations require the development of TMDL implementation plans, or states voluntarily attempt to develop these plans as part of the TMDL development process, TMDL writers might consider providing technical assistance type information in the implementation plan. TMDL writers can also consider incorporating recommendations on BMPs to implement the load reductions as part of the TMDL report. Permit writers can consider providing TMDL implementation technical assistance to permittees through the permit fact sheet or compliance assistance documents.
- **Developing BMP performance standards to include in the TMDL or permit.** In some instances, the TMDL or permit might focus on BMP performance standards, rather than actual BMP recommendations or requirements. TMDL and permit writers in the role of stormwater planners can develop BMP performance standards to implement WLAs. Performance standards provide sources with the flexibility to select structural and nonstructural BMPs that are locally suitable while achieving the required or recommended performance standard. For example, New Jersey's Stormwater Management Rules (N.J.A.C. 7:8) requires *major development* projects that create at least 0.25 acres of new or additional impervious surface to include stormwater management measures that reduce the average annual TSS load in the development site's post-construction runoff by 80 percent. This type of performance standard allows sources in the role of stormwater planners to identify, select, and implement the most effective structural and nonstructural BMPs for a site or facility.

Regardless of who plays the role of stormwater planner and to what degree, it is important for TMDL and permit writers to understand the range of potential BMPs, technical information related to BMP performance, processes for BMP selection, and adaptive management techniques to ensure that implementation recommendations and requirements translate into effective, on-the-ground implementation actions by sources. It is also important that permit writers and other agency staff

involved in permitting activities (e.g., enforcement and compliance staff) have an understanding of BMP implementation and adaptive management for purposes of reviewing and approving (where applicable) permit information and documentation (e.g., SWMPs, annual reports, monitoring data).

The focus of this chapter is on the technical considerations necessary for selecting appropriate BMPs, evaluating BMP effectiveness over time, and making modifications to BMP implementation to ensure continuous water quality improvements. The goal of this chapter is to present these technical considerations to help stormwater planners as they develop implementation recommendations and requirements for use in TMDLs and permits to form the basis for demonstrating that TMDLs are adequately addressed in permits and associated SWPPPs and SWMPs. Although the focus of this chapter is on TMDL and permit writers serving as stormwater planners, the information presented in this chapter might also benefit permittees playing the role of stormwater planners.

5.2. Key Questions for Promoting Effective BMP Implementation

Stormwater planners can ask a series of six key questions to promote effective BMP implementation through an adaptive management framework. The adaptive management framework consists of planning, implementing, evaluating and learning, and adjusting. The six key questions are as follows:

1. What is the current pollutant loading from the stormwater source's discharge to the impaired waterbody accounting for existing BMPs?
2. What additional loading reduction is necessary to implement the WLA?
3. What additional BMPs might provide the remaining pollutant load reductions necessary to implement the assigned WLA on the basis of the expected performance of these BMPs?
4. How should permittees measure BMP performance as implementation proceeds?
5. Are measured pollutant load reductions adequate to make progress toward the assigned WLA over time?
6. What modifications to the overall implementation strategy are necessary to make further progress toward implementing the WLA?

Stormwater planners can use these key questions to guide implementation and adaptive management activities to achieve progress toward implementing WLAs. Although the discussion of the key questions highlights potential roles for TMDL and permit writers, sources might find these key questions helpful in conducting their implementation planning activities to comply with permit requirements.

5.2.1. Establishing the Baseline Load and Accounting for Existing Load Reductions (Key Questions 1 and 2)

The planning phase of adaptive management focuses on selecting BMPs to achieve the WLA and associated performance indicators to aid in tracking progress. Because the goal is to make iterative progress toward implementing a WLA, it is first necessary to quantify the starting point from which a source should measure progress. This is often referred to as the baseline. The baseline for a source might vary, depending on the context of the TMDL analysis. Sometimes the baseline pollutant loads for a

source's discharge might take into account existing BMPs, and sometimes it might not. Stormwater planners involved in implementation planning should address the issue of a source's baseline by asking the first two key questions as follows:

1. What is the current pollutant loading from the stormwater source's discharge to the impaired waterbody accounting for existing BMPs?
2. What additional load reduction is necessary to implement the WLA?

5.2.1.1. Answering Key Question 1: Determining Current Pollutant Loading from Stormwater Source Discharge

Stormwater planners can first review the TMDL to determine how the analysis defined a source's pollutant baseline load. During the development of the TMDL, the TMDL writer characterizes the pollutant loads from existing stormwater discharges. It is important for stormwater planners to review the TMDL analysis to determine the approach used to characterize pollutant loads from stormwater discharges. For example, the TMDL report should indicate if the TMDL writer made this determination on the basis of modeling using literature values for land use types and other generalized assumptions related to the stormwater source or if the analysis included real-world data and information, such as monitoring data to calibrate the model to actual conditions.

After identifying the stormwater discharge pollutant loading used in the TMDL analysis, stormwater planners can then determine if the analysis accounted for any existing BMPs and, if so, the assumed or measured pollutant load reductions from those BMPs. If the TMDL analysis does account for existing BMPs, stormwater planners can use the pollutant loading information contained in the TMDL analysis as the starting point for gauging progress toward the WLA. Stormwater planners should attempt to verify that the existing BMPs used in the TMDL analysis represent a comprehensive and accurate listing.

It is important for TMDL writers to remember that the information provided in the TMDL, as well as the assumptions used in the analysis, can influence the BMP selection process. The information contained in the TMDL serves as the basis for identifying the pollutants of concern and their source, which broadly indicates the type(s) and locations of BMPs needed to implement the pollutant load reductions from the sources with assigned WLAs. Greater specificity in the characterization of existing stormwater loads can likely promote more effective implementation.

If the TMDL analysis does not provide comprehensive information on existing BMPs, answering key question 1 requires conducting two activities: (a) accounting for existing BMPs and (b) quantifying the associated pollutant load reductions. The first activity involves developing an inventory of existing BMPs that would affect loads of the pollutant of concern. The second activity involves measuring or estimating the pollutant load reductions from the BMPs identified in the inventory.

5.2.1.1.1 Key Question 1, Activity A: Inventorying Existing BMPs

A BMP inventory is a comprehensive listing or database of existing structural and, if applicable, nonstructural BMPs that directly or indirectly address the impairment(s). For structural BMPs, the inventory should include information on the type of BMP, location, date of installation, area treated by the BMP, and design and maintenance issues. For nonstructural BMPs, the inventory should include information on type of activity, implementation schedule, area addressed, and performance related data.

Stormwater planners involved in implementation activities for sources covered by individual stormwater permits might feasibly engage in developing BMP inventories by working with sources. For sources covered by general permits, it is unlikely that stormwater planners will conduct this activity. Instead, permit writers might opt to include in general permits a requirement for developing a BMP inventory. Through this option, stormwater planners could provide criteria to assist sources in the development of a BMP inventory, such as defining the type or location of BMPs that are most appropriate to address the impairment(s). The TMDL writer could include these BMP inventory criteria in the TMDL or the permit writer could include the criteria in the permit with the BMP inventorying requirement.

Sources can also develop an accurate and comprehensive BMP inventory without the aid of criteria in the TMDL or permit. Permit writers can include BMP inventory requirements in permits that instruct sources to review existing SWPPPs or SWMPs—depending on the type of permittee—and identify BMPs that are likely to address the impairment(s). Sources would develop BMP inventories in compliance with this requirement through inspections or *desktop auditing*, depending on the type and number of BMPs in place.

Technical issues related to compiling a BMP inventory can vary depending on the type of stormwater source—industrial facility, construction site, or MS4. Therefore, stormwater planners—particularly permit writers—should keep these technical issues in mind when developing permit requirements related to compiling BMP inventories. For industrial facilities and construction sites, compiling a BMP inventory might involve a review of SWPPPs or a thorough facility inspection or monitoring of influent and effluent of BMP structures. This approach would obviously be very complex within some MS4s, however, because of the sheer numbers of BMPs and the difficulty in locating and characterizing them. The level of detail, therefore, for the BMP audit at an MS4 might be less, and many assumptions might need to be made. For example, an MS4 responsible for conducting a BMP inventory as part of the implementation process to implement a TSS WLA might determine that it is necessary to include all erosion and sediment control BMPs on active construction projects. Because of the large number and dynamic nature of construction projects, however, the MS4 might determine that it is not feasible to do an actual count of the numbers of various types of BMPs. Therefore, the MS4 uses the assumption that all active construction sites implement certain standard BMPs (i.e., silt fence, construction entrances, sediment traps) due to local ordinance and state permit requirements. The MS4 could then assume a certain *noncompliance factor* after reviewing enforcement actions against existing sites to attempt to correct for improper implementation of BMPs in the field when modeling actual contribution. Using municipal planning tools, municipalities with permitted MS4s can also project the number and location of future construction sites on the basis of growth projections, comprehensive planning, and land use zoning.

> ***Resources:*** For more information on compiling a BMP inventory, refer to the Resources list at the end of this chapter in Section 5.3.1.

In Practice: Promoting the Development of an Existing BMP Inventory in Washington

The draft Phase II MS4 General Permit for Western Washington (Appendix 2) contains the list of all TMDLs in western Washington that include specific implementation activities that go beyond the general permit requirements. The general permit requires permittees with WLAs under these TMDLs to implement the activities specified in Appendix 2. Some of these additional requirements include developing an inventory of existing BMPs. For example, the Snohomish River Tributaries fecal coliform TMDL (2001) in Washington requires (via the permit) permittees to implement *baseline* source control BMPs for (1) commercial animal handling areas and (2) commercial composting facilities. The TMDL requires (via the permit) that the permittees compile a list of the existing facilities and conduct inspections of them to ensure implementation of

source control BMPs. After meeting these baseline conditions, permittees must develop and implement a Bacterial Pollution Control Plan.

In addition to the type of stormwater source, the effort of compiling a BMP inventory can have an additional set of technical issues if the inventory is to include nonstructural BMPs. Nonstructural BMPs are typically programmatic in nature, such as good housekeeping practices at a transportation facility. While it might prove easy to account for these activities, it is not always easy to determine the pollutant load reduction associated with these activities. In the case of programmatic BMPs, stormwater planners should consider the need to make assumptions about defining what it means to implement nonstructural BMPs according to plan and justifying associated assumptions.

5.2.1.1.2 Key Question 1, Activity B: Quantifying Load Reductions from Existing BMPs

After the BMP inventory is complete, stormwater planners can either undertake the second activity of key question 2 or develop recommendations or requirements for sources related to this activity. The second component of key question 2 focuses on measuring or estimating the pollutant load reductions associated with the existing BMPs. Quantifying existing pollutant load reductions can help to determine if sources have made any progress toward implementing the WLA if the TMDL had assumed no BMP implementation.

It is important that planners consider how best to evaluate and quantify the effectiveness of BMPs and provide guidance to sources either through the TMDL or the permitting process. Evaluation techniques might vary by the type of BMP, pollutant type, and other factors. It is particularly important to provide this type of guidance in instances where multiple sources addressed under the same TMDL will participate in BMP evaluations to determine progress toward the same or related WLAs. Ensuring that sources are using similar evaluation techniques for similar BMPs can not only provide a more defensible pool of BMP performance data, but also provide a level of equity among sources as they determine progress toward implementing WLAs.

Quantifying pollutant load reductions associated with existing BMPs can vary in complexity for sources, depending on the size of the source's permitted boundary, the number and types of BMPs, and whether they are structural versus nonstructural. For example, it might be relatively easy to determine the effectiveness of BMPs at an industrial facility with a single defined outfall and four oil/water separators which treat the runoff from the processing facility and parking lots than it would be to quantify the effects of multiple, individual BMPs or an entire MS4 SWMP.

For a source with many BMPs, such as a large MS4 or a large construction site, the most viable option might be a suite of evaluation techniques that include monitoring, researching applicable literature values, and modeling using justifiable assumptions. For example, a large construction site with several types of erosion and sediment control BMPs could choose to either monitor representative BMPs or use existing literature to determine optimum sediment removal efficiency. Using the values for representative pollutant removal, the source could then estimate erosion and sediment control BMPs throughout the entire construction site.

The complexities only increase when trying to quantify the effects of more programmatic BMPs, including employee training on good housekeeping techniques, public outreach, and inspections of industrial/commercial facilities. Many of these activities focus on source reduction and pollution prevention or behavioral changes that are difficult to translate into pollutant load reductions.

BMPs are likely to vary among the types of sources; therefore, appropriate evaluation techniques and approaches are likely to also vary. Evaluation techniques might also vary depending on the specific pollutant of concern or impairment that a source is trying to address through BMP implementation.

The evaluation of stormwater management BMPs and plans can be very complex because many of these BMPs and plans focus on nonstructural, source reduction activities that prevent pollutants from entering the storm sewer system to begin with. As a result, there might not be any easy means to quantify the associated pollutant load reductions. Stormwater planners attempting to quantify pollutant load reductions from BMPs can likely have to generate estimates using a wide range of information sources ranging from state and local studies, national BMP performance data, monitoring data, modeling, and assumptions based on best professional judgment. It is critical that TMDL and permit writers keep these challenges in mind when developing WLAs and recommendations or requirements for assessing progress toward WLAs. The TMDL itself needs to account for the complexities of quantifying the effects of BMPs on stormwater runoff and the permit writer needs to allow for flexibility in the development of assessment strategies.

Regardless of the difficulty level, it is in the source's best interest that stormwater planners conduct the inventory of existing BMPs thoroughly and justifiably. If the source is the primary stormwater planner and is conducting the BMP inventory, the permit writer might want to review the BMP inventory procedure before initiation to confirm that the pollutant load reductions attributed to existing BMPs are appropriate. If a review of the BMP inventory procedure is a permit requirement, the permit writer should consider explicitly stating what the source must submit for review and approval. Information in the final inventory can assist sources with future implementation efforts, including scheduling and tracking maintenance activities and compiling records and reports.

In Practice: Conducting a BMP Effectiveness Evaluation in Portland, Oregon

Portland conducted an evaluation to determine the effectiveness of existing stormwater BMPs. According to the summary document, *Effectiveness Evaluation of Best Management Practices for Stormwater Management in Portland, Oregon* (www.portlandonline.com/shared/cfm/image.cfm?id=133994), the purpose of the effectiveness evaluation was to "develop and document the effectiveness ranges and preferred values for all BMPs either currently in use or anticipated for use in the management of stormwater quality and quantity in the City of Portland." The evaluation methodology focused on analyzing a list of BMPs that met specific criteria, including BMPs required to implement TMDLs. The methodology also focused on surrogate pollutants selected to represent whole classes of pollutants. Surrogates included TSS, dissolved zinc, *E. coli*, and total phosphorus. In addition to water quality parameters, the evaluation addressed flow rates and volume, temperature, and habitat issues. Through the evaluation, Portland derived values for BMP performance using a wide variety of information sources as well as best professional judgment. The evaluation provides a range of effectiveness values for each BMP to account for uncertainty and location-specific or application-specific conditions that result in various points in the range of values. The evaluation serves as the necessary documentation of methods and assumptions to facilitate future review of BMP effectiveness and to evaluate the applicability of a particular value to a specific BMP.

5.2.1.2. Answering Key Question 2: Determining Additional Load Reductions Necessary to Implement the WLA

After quantifying the measured or estimated pollutant load reductions associated with existing BMPs, stormwater planners can calculate the remaining pollutant load reductions necessary to implement the WLA. This value can serve as the driver for addressing key question 3: selection of additional BMPs.

By comparing the information generated to answer key question with the overall pollutant load reduction necessary to implement the WLA, stormwater planners can estimate the magnitude of the pollutant load not addressed by BMPs. The difference between the source's actual contribution (defined as the baseline pollutant load minus the pollutant load reductions addressed through existing BMPs) and the assigned WLA is the additional amount of pollutant removal that the source can implement through additional BMPs.

5.2.2. Selection of Additional BMPs to Implement WLAs (Key Question 3)

The information generated under key question 2 can serve as a starting point for stormwater planners to answer key question 3:

What additional BMPs might provide the remaining pollutant load reductions necessary to implement the assigned WLA on the basis of the expected performance of these BMPs?

> ***Tip: Ensure proper O&M to maximize BMP performance and resource investment***
>
> State planners can remind sources that O&M are extremely important factors in maximizing BMP effectiveness. Sources might maximize pollutant load reductions by improving the O&M of existing BMPs rather than investing in additional BMPs. TMDL and permit writers can develop recommendations and requirements that ensure sources focus on proper O&M of BMPs intended to achieve progress toward WLAs.

Answering key question 3 also entails two activities: (a) identifying the list of possible BMPs to address the pollutant of concern or impairment and (b) quantifing the expected performance of each BMP under consideration. The role of stormwater planners in the BMP identification and selection process can vary depending on the approaches discussed at the beginning of this chapter. In addition, factors such as the type of source and the type of permit under which the source has coverage can also affect the role of stormwater planners at this phase of implementation planning. For example, TMDL and permit writers playing the role of stormwater planners can work closely with sources covered under an individual permit (e.g., large and medium MS4s) to conduct an analysis of possible BMPs and select a final suite of prescribed BMPs to include in the permit. Where general permits are available to sources, TMDL and permit writers playing the role of stormwater planners might rely on the use of performance standards in TMDLs and permits, while providing broad technical assistance through guidance documents. For example, TMDL and permit writers could research a range of possible BMPs and provide some of the information (e.g., expected performance information, cost, maintenance requirements) that sources would need to evaluate and identify the most suitable additional BMPs to address the remaining pollutant load reductions necessary to implement the WLA. Stormwater planners should keep in mind the range of other factors that can ultimately influence a source's decision to implement a BMP, such as location, cost, and maintenance.

The topics of identifying possible management strategies and selecting final management strategies to implement pollutant load reduction targets are discussed extensively in Chapters 10 and 11 of EPA's *Handbook for Developing Watershed Plans to Restore and Protect Our Waters* (USEPA 2008a). While

the information provided in this extensive EPA resource is geared toward sources with implementation responsibilities, the process for screening and selecting BMPs described in these chapters have applicability to planners involved in TMDL implementation planning activities considering developing a suite of recommended or required BMPs to include in the TMDL or the permit. This section provides an overview of BMP identification and selection information that would benefit stormwater planners playing a more active role in this step of the process.

5.2.2.1. Key Question 3, Activity A: Identifying List of Possible BMPs

Identifying and selecting BMPs to implement the remaining pollutant load reductions involves compiling a list of candidate BMPs appropriate for the pollutant of concern or the impairment and determining a BMP performance rating (i.e., expected pollutant load removal or flow rate and volume reduction). It is possible that much of this work might already be done by addressing key question 1 focused on inventorying and estimating the pollutant load reductions from existing BMPs. However, the suite of BMPs available to implement a WLA might encompass BMPs beyond those already implemented by a source. Therefore, the list of candidate BMPs is likely to include both existing and new practices for consideration.

> ***Resources:*** For more information on BMP selection, refer to the Resources list at the end of this chapter in Section 5.3.2.

Stormwater planners should consider providing a suite of BMPs that encompasses every possible category of controls: source controls, treatment controls, structural controls, and nonstructural controls. Source controls are BMPs that seek to reduce the presence, use, or exposure of pollutants to the weather; volume controls promote infiltration, evapotranspiration and reuse of water, detention, or retention of stormwater and its constituents. Treatment controls are BMPs that attempt to remove or inactivate pollutants through physical, chemical, or biological processes. Structural controls are built structures or facilities that capture runoff, treat it through chemical, physical, or biological means, and discharge the treated effluent to the soil, the stormwater conveyance system, or directly to surface waters. Nonstructural controls usually involve management practices that focus on changes in activities or behaviors, as well as focus on controlling pollutants at their source. Examples include developing and implementing erosion and sediment control plans, organizing public education campaigns, and practicing good housekeeping at municipal, commercial, and industrial facilities. Regulatory and policy tools, such as ordinances, operating procedures, and maintenance schedules, are also examples of nonstructural controls.

> ***Tip: Addressing peak flows to reduce channel impacts***
>
> To prevent downstream degradation and maintain stream channel stability, planners should promote maintenance of predevelopment runoff volumes and rates for new development and redevelopment. Recent research shows that simply requiring site designs not to exceed pre-development runoff rates for a specified storm size (e.g., a detention basin designed to limit release rates) will not adequately protect the hydrology and habitat of the receiving water. Management practices that slow, detain or infiltrate the runoff and release it slowly via baseflow to the receiving stream systems can replicate predevelopment site conditions and ensure both adequate aquifer recharge and stream base flow.

It is important to note that for certain types of impairments in certain areas nonstructural controls and source reduction practices might be less expensive and more effective than structural controls. For example, implementing new policies for sweeping streets and addressing illicit discharges is often less costly and more protective of water quality than constructing ponds or other stormwater treatment facilities at down-gradient locations. For example, stormwater planners addressing areas with seasonal chloride impairments associated with deicing activities can consider nonstructural practices

such as alternatives to salt or salt reduction management activities (e.g., calibrating salt trucks) rather than structural BMPs.

Many BMPs do and should target volume reductions (i.e., flow) to reduce total pollutant load. In addition to pollutant load reductions, BMPs that provide volume reductions also reduce channel erosion, alleviating impacts related to increased runoff. Streambank erosion, channel deformation and down-cutting, and loss of natural habitat are among the more common effects of increased runoff from impervious surfaces. Stormwater planners can promote BMPs that reduce volumes through infiltration and evapotranspiration to ensure that BMPs are most effective in protecting or restoring impaired waterbodies. Volume reduction can also play a significant role in overall pollutant load reduction, which might not be immediately apparent if a BMPs ability to reduce incoming effluent concentrations is the primary metric by which it is measured. When a BMP, such as a rain garden or bioretention practice, captures a portion of incoming runoff and infiltrates it into the soil, the pollutants in that portion are prevented from entering a nearby river, lake, wetland, or coastal water. Simply comparing the concentration in and the concentration out of a BMP does not account for this pollutant load reduction due to infiltration.

Because flow is a critical factor to consider during BMP selection and implementation, stormwater planners can promote that sources first consider source controls and volume reduction controls before considering more traditional treatment controls. One option for doing so is to include only these types of BMPs on a list of prescribed BMPs (e.g., sources must implement all BMPs on the list) or on a required menu of options (e.g., sources must select one or more BMPs from the list). Another option could involve stormwater planners developing recommendations or requirements that indicate that sources must first examine source and volume reduction controls to implement remaining pollutant load reductions and provide associated assumptions that indicate treatment controls are more appropriate or effective at reducing remaining loads.

Resources: For more information on volume control, refer to the Resources list at the end of this chapter in Section 5.3.3.

In Practice: Promoting Maintenance of Predevelopment Runoff Volumes and Rate in New Jersey

New Jersey's Stormwater Management Rules (N.J.A.C. 7:8) recognize that predevelopment site hydrology is essential to maintain to protect downstream hydrology. The New Jersey Model Stormwater Control Ordinance for Municipalities, included in the *New Jersey Stormwater Best Management Practices Manual* (www.state.nj.us/dep/stormwater/tier_A/bmp_manual.htm) as Appendix D, contains requirements pertaining to controlling stormwater runoff quantity impacts. The ordinance requires developers to select and comply with one of the requirements. Two requirements focus on conducting a hydrologic and hydraulic analysis that compares pre-construction runoff volume and rates with post-construction conditions. A third requirement focuses on performance standards for stormwater management measure design to control post-construction peak runoff rates.

In Practice: Promoting Consideration of Nonstructural Controls First in New Jersey

The New Jersey Model Stormwater Control Ordinance for Municipalities (referenced above) encourages MS4s to require developers to first consider nonstructural controls into new development designs. The model ordinance provides a list of nonstructural controls that includes protecting natural vegetation and drainage; protecting areas susceptible to erosion; minimizing impervious surfaces and breaking up or disconnecting flow over impervious surfaces; providing low maintenance landscaping; and incorporating source controls to minimize use and exposure of pollutants into site designs. The ordinance language states that if the developer contends it is not feasible to include these nonstructural controls into a project, the developer must provide the engineering, environmental, or safety reasons that render use of the nonstructural controls unfeasible.

Resources: For more information on GI and LID, refer to the Resources list at the end of this chapter in Section 5.3.4.

In many cases, functions of the various BMPs can overlap and can reduce a pollutant in more than one way. For example, green infrastructure (GI) and low impact development (LID) practices control the volume of stormwater being delivered downstream, which can help reduce streambank erosion and sediment loading, while also retaining sediment. GI and LID are stormwater management approaches and practices intended to eliminate or reduce urban runoff and pollutant loadings by managing the runoff as close to its sources as possible. As a collection of small-scale practices, linked together on a site, GI/LID have the potential to reduce the effects of development and redevelopment activities on water resources by maintaining or replicating the predevelopment hydrology of the site. Through practices such as rain gardens, vegetated swales, pervious pavements, and green roofs, GI/LID promote on-site infiltration, evapotranspiration, or reuse of rainwater.

The final mix of structural and nonstructural management practices selected can, most importantly, be determined by which pollutants each BMP can effectively address and, more importantly, what specific level of performance each can provide. This can depend upon several highly variable factors, including the concentration and total load of the pollutant in the runoff, the volume and various rates of the runoff, antecedent rainfall and runoff conditions, and even the season or time of year. The variability of both applicable pollutants and levels of treatment can be seen by reviewing the sampling results of actual structural facilities taken over a number of storm events. Depending on the pollutant, the reduction in pollutant load or mean concentration achieved by selected structural facilities can vary considerably from event to event, with even negative reductions achieved at times, particularly for nutrients. Such variability makes it extremely difficult to determine a structural facility's exact pollutant removal rate and illustrates why pollutant removal criteria are typically based on average annual conditions.

Tip: Calculating the savings associated with GI

The Green Values® Stormwater Calculator (http://greenvalues.cnt.org/calculator), developed by the Center for Neighborhood Technology, helps users see how GI can help save money and increase hydrologic benefits. It can be used to estimate the benefits of LID and conservation practices and allows users to input site development characteristics and green practices and returns financial and hydrologic outcomes for different scenarios.

5.2.2.2. Key Question 3, Activity B: Determining Expected BMP Performance

Evaluating the potential performance of a BMP is a potentially challenging activity, but the information generated through this activity is essential to selecting BMPs with the most potential for making progress toward WLAs and attainment of water quality standards. Although this activity is discussed as

a separate activity after compiling the list of possible BMPs, planners can make assumptions and determinations about BMP performance *while* generating the list.

There are three important factors to consider when evaluating the potential performance of BMPs: concentration, volume, and total load. Estimating the total pollutant load reduction associated with a BMP is probably the best way to evaluate overall BMP performance. To calculate the total load, multiply the volume of water discharged by the BMP over a given period by the mean or average concentration of the pollutant. EPA's Urban BMP Performance Tool Web site, at http://cfpub.epa.gov/npdes/stormwater/urbanbmp/bmptopic.cfm, provides an in-depth discussion of these factors and other considerations for evaluating potential BMP performance.

Stormwater planners can estimate load reductions from BMPs in a number of ways. The most desirable method would be to monitor a BMP for every rain event over the course of several years to determine the volume of water coming into and leaving the BMP and the associated changes in pollutant concentrations. Rarely, however, is this level of monitoring possible because of resource constraints or because the type of BMP does not lend itself to this kind of *water in—water out* type of monitoring. This is important for planners to keep in mind when considering options related to monitoring and assessing implementation progress as part of the overall adaptive management framework.

Other options for evaluating potential BMP performance include using existing information from past BMP studies and evaluations or computer-based predictive tools. Stormwater planners can consider the strengths and challenges associated with each option for evaluating potential BMP performance to determine which approach to use for supporting internal implementation planning activities, or to promote through recommendations and requirements for sources. Planners should consider several factors when examining each potential approach, including water quality parameters, source types, local conditions, available data, and user experience. Approaches range from simple to complex. Simple approaches include the use of published literature values for typical BMP performance or simple, spreadsheet-based models that calculate loads delivered to and removed by management measures. Complexity increases with the use of watershed models, which require substantial data inputs on multiple management techniques and can evaluate the optimum placement of BMPs as well as their performance. Simpler models are often sufficient to meet the needs of an analysis and are advantageous when time and budget resources are limited. Considerations for the use of literature values versus computer-based predictive tools are provided below.

> ***Tip: Understanding "Percent Removal"***
>
> Percent removal is a common metric for gauging BMP effectiveness. The pollutant concentration of stormwater flowing into a BMP is compared to the pollutant concentration of stormwater discharged after treatment by the BMP. Stormwater planners should understand the advantages and challenges associated with using percent removal as a way to determine BMP performance. One advantage of using percent removal is that it is a relatively available estimation of BMP performance. The challenge, however, is that percent removal can be a misleading statistic. For example, percent removal depends primarily on the influent quality. A BMP treating very *dirty* runoff will have a higher percent removal than the same BMP treating *cleaner* runoff. Also does not take into account volume reductions achieved through the BMP. For more detail describing why percent removal is a poor measure of BMP performance, see the fact sheet developed for the international stormwater BMP database at www.bmpdatabase.org/Docs/FAQPercentRemoval.pdf.

5.2.2.2.1 BMP Literature Values

One method used for predicting load reductions from BMPs is to use literature values of performance typically associated with type

> ***Resources:*** For more information on BMP performance literature values, refer to the Resources list at the end of this chapter in Section 5.3.5.

of management practice and pollutant (e.g., detention pond, sediment). The percent reductions commonly documented in the literature are normally estimated from one or more monitoring studies where performance of BMPs was measured using flow and chemical monitoring. For example, the effectiveness of management practice systems could be calculated using the relative effectiveness of individual practices. Stormwater planners using this approach should verify that the study carefully estimated inflow pollutant concentrations and should also take volume reductions into consideration. This approach can help with initial BMP scoping and screening. However, planners using this approach to estimate pollutant load removals should be aware that this approach might oversimplify and overestimate cumulative removal rates for BMP treatment trains.

5.2.2.2.2 Modeling Tools

Stormwater planners can select or refine a list of potential BMPs using computer-based predictive tools, or modeling. Modeling stormwater pollutant load reductions from BMPs commonly involves three primary measures—pollutant concentrations in the stormwater at some point in time, the total pollutant load conveyed over a time period, and the event mean concentration. Stormwater planners can refer to the TMDL analysis to determine what modeling approach the TMDL writer used and if it is possible to use the same model to narrow the range of BMP options and aid in siting and sizing them. Performance standards for management practices often include controls on the stormwater peak discharge rate, the total runoff volume, and the total pollution load, which often is the focus of the WLA. Load reductions for individual and multiple BMPs—functioning as groups of practices or consecutive facilities arranged in a treatment train—can be modeled in some cases by using BMP calculators built into watershed models. For example, planners can use SWMM to evaluate urban area management practices and has the capabilities to emulate the major management practice processes (i.e., storage, infiltration, first-order decay, and sediment settling). The recently added overland flow rerouting (land-to-land routing) options block can be used to mimic the parcel (individual lot) level sites.

Resources: For more information on model applicability, refer to the Resources list at the end of this chapter in Section 5.3.6.

A variety of more BMP-specific modeling options exist to simulate specific BMPs or unique situations. In some cases, specialized watershed models and management practice models are used to perform small-scale analysis of BMPs. Table 12 provides a brief description of several specialized models that can aid planners in selecting and siting BMPs to implement progress toward WLAs.

Those selecting BMPs can take into account the unique set of conditions associated with each stormwater source. In addition to performance, sources will undoubtedly need to consider other selection factors that have little to do with water quality improvement. If the planning is being conducted by someone other than the permittee, consultations with industrial, construction site, and MS4 permittees during this process can help to create a bridge for discussions regarding BMPs selected, sites, designs, size, and cost.

Tip: Determining if models used in TMDL development are appropriate for implementation planning.

If the TMDL development process involved watershed modeling, planners might have an opportunity to use this type of model for selecting and siting BMPs. Planners can work with TMDL writers to determine if the watershed model contains the necessary data for BMP implementation analysis. TMDL writers can also keep in mind the potential a watershed model might have for implementation planning purposes early in the TMDL development process.

Table 12. Description of modeling tools available for BMP selection, sizing, and siting decision making

Model/tool	Description
The Site Evaluation Tool (SET)	The model was developed to assess the effects of development, including sediment and nutrient loading, on a site scale. The tool allows definition of pre- and post-treated land use, allowing for multiple drainage areas and various combinations of practices. Structural and nonstructural practices can be represented, giving the user a suite of options for evaluation. www.unrba.org/set/index.shtml
Prince George's County BMP-Decision Support System (PG BMP-DSS)	The PG BMP-DSS evaluates the effect of management practices or combinations of management practices on flow and pollutant loading. This module uses simplified process-based algorithms to simulate management practice control of modeled flow and water-quality time series generated from runoff models such as HSPF. These simple algorithms include weir and orifice control structures; storm swale characteristics; flow and pollutant transport; flow routing and networking; infiltration and saturation; and a general loss/decay representation for a pollutant. The module offers the user the flexibility to design retention-style or open-channel management practices; define flow routing through a management practice or management practice network; simulate Integrated Management Practices such as reduced or discontinued imperviousness through flow networking; and compare management practice controls against a defined benchmark such as a simulated predevelopment condition.
Model for Urban Stormwater Improvement Conceptualization (MUSIC)	MUSIC was developed to evaluate small and large-scale (100 square kilometer) urban stormwater systems using modeling time steps that range from 6 minutes to 24 hours. MUSIC provides an interface to help set up complex stormwater management scenarios. The stormwater control devices evaluated by MUSIC include ponds, bioretention, infiltration buffer strips, sedimentation basins, pollutant traps, wetlands, and swales. Major techniques used to evaluate management practices including settling in ponds and decay of pollutants. www.toolkit.net.au/cgi-bin/WebObjects/toolkit.woa/wa/productDetails?productID=1000000
Integrated Design and Evaluation Assessment of Loadings (IDEAL)	IDEAL provides a spreadsheet-based technique for assessing the benefits of urban management practices on flow, sediment, nutrients and bacteria. The model predicts watershed runoff, concentrations, and loads, using the user's selection of vegetative filter strips, dry detention ponds, and wet detention ponds. Urban areas are defined as pervious, impervious connected, and impervious unconnected areas. Flow and loads can be directed to a pond that can be either dry (no permanent pool) or wet (permanent pool). The model then calculates the pollutant removal efficiencies of the practices using empirical equations. The model predicts single storm values and converts them to average annual storm values using a statistical process. The IDEAL model is designed to help managers estimate long-term management practice pollutant removal efficiencies and is not designed for looking at individual storms. www.greenvillecounty.org/land_development/Planning.asp
Soil and Water Assessment Tool (SWAT)	SWAT is a river basin-scale model developed to quantify the effect of land management practices in large, complex (primarily agricultural) watersheds. SWAT was developed to predict the effect of land management practices on water, sediment, and agricultural chemical yields in watersheds with varying soils, land use, and management conditions over long periods of time. www.brc.tamus.edu/swat/
Storm Water Management Model (SWMM)	SWMM is a dynamic rainfall-runoff simulation model applied primarily to urban areas and for single-event or long-term (continuous) simulation using various time steps. It was developed for analyzing surface runoff and flow routing through complex urban sewer systems. In SWMM, flow routing is performed for surface and subsurface conveyance and groundwater systems, including the options of nonlinear reservoir channel routing and fully dynamic hydraulic flow routing. SWMM has a variety of options for quality simulation, including traditional buildup and washoff formulation as well as rating curves and regression techniques. SWMM can simulate storage, treatment, and other BMPs. www.epa.gov/ednnrmrl/models/swmm/index.htm
Vegetative Filter Strip Model (VFSMOD)	VFSMOD provides specialized modeling of field-scale processes associated with filter trips or buffers. This model provides routing of storms runoff from an adjacent field through a vegetative filter strip and calculates outflow, infiltration, and sediment trapping efficiency. The model is sensitive to characteristics of the filter including: vegetation roughness or density, slope, infiltration characteristics, and the incoming runoff volume and sediment particle sizes. http://carpena.ifas.ufl.edu/vfsmod/

Model/tool	Description
Wetland water balance and nutrient dynamics model (WETLAND)	WETLAND is a dynamic compartmental model to simulate hydrologic, water quality and biological processes and to assist the design and evaluation of wetlands. The model can simulate both free-water surface and subsurface flow wetlands. WETLAND is modular and includes hydrologic, nitrogen, carbon, dissolved oxygen, bacteria, sediment, vegetation, and phosphorous submodels.
Virginia Field Scale Wetland Model (VAFSWM)	VAFSWM is a field-scale model for quantifying the pollutant removal in a wetland system. It includes a hydrologic subroutine to route flow through the treatment system; precipitation, evapotranspiration, and exchange with subsurface groundwater.
Delaware Urban Runoff Management Model (DURMM)	The Delaware Department of Natural Resources (DNREC) created DURMM to provide a more rigorous hydrological design tool for Green Technology BMPs. Green Technology BMPs are designed to "intercept runoff from rooftops, parking lots and roads as close as possible to its source, and direct it into vegetative recharge/filtration facilities incorporated into the overall site design and runoff conveyance system." They include conservation site design, impervious area disconnection, conveyance of runoff through swales and biofiltration swales, filtration through filter strips, terraces, bioretention facilities, and recharge through infiltration facilities. www.swc.dnrec.delaware.gov/Pages/SedimentStormwater.aspx
Basin Sizer	The Basin Sizer program allows users to find information useful for sizing stormwater basins in California. It is built from the STORM model and performs continuous simulation. Elements sized include infiltration basins, detention basins, and flow-based BMPs. http://stormwater.water-programs.com/BasinSizer/Basinsizer.htm
City of Emeryville Stormwater Sizing Worksheet	This spreadsheet allows the user to size metered detention, bioretention, planter strip, flow-through planter box, and biofiltration BMPs. www.ci.emeryville.ca.us/planning/stormwater.html

In Practice: Predicting BMP performance using a BMP Decision Support System in Vermont

The Vermont Department of Environmental Conservation has developed a BMP Decision Support System (BMP-DSS) to facilitate stormwater permit issuance and compliance under the state's stormwater regulation. The BMP-DSS is an innovative decision-making tool for evaluating placement and selection of BMPs and LID techniques at strategic locations in urban watersheds. It uses GIS technology, integrates BMP process simulation models, and applies system optimization techniques for BMP placement and selection to address the cost/benefit issues associated with stormwater management. The model provides the continuous simulation of hydrographs and pollutant loads and concentrations so that the effectiveness of LID approaches can be simulated within large-scale watersheds models such as HSPF and SWMM. It offers the user the flexibility to design stormwater structural practices such as bioretention cells, rain barrels, roof gardens, vegetated swales, infiltration chambers, wetlands and off-line regional stormwater retention and detention ponds. It also includes the simulation of site design characteristics such as storm drains, building density, road and sidewalk dimensions, disconnection of impervious surfaces, and compares BMP controls against some defined benchmark such as a simulated predevelopment condition.

In Practice: Predicting BMP performance using a Site Evaluation Tool in the Upper Neuse River Basin, North Carolina

The Upper Neuse River Basin Association (UNRBA), made up of 13 city and county governments in the Triangle region of North Carolina, works to protect water resources within the 770-square-mile watershed above Falls Lake dam. Critical issues in the watershed are risk of nutrient enrichment in water supply reservoirs and effects on stream aquatic life from sediment loading and stream channel erosion. The Upper Neuse Site Evaluation Tool (SET) was developed under the guidance of many of the participating governments that were interested in a tool that could be used for both UNRBA goals and for local stormwater programs. This version of the SET included the ability to predict storm event peak flows and hydrographs, with scoping-level assessment of BMP influence on the storm event hydrographs. Model output was also tailored to assess site performance against variable nutrient loading rate goals on the basis of the user's selection of the whether the site was residential or nonresidential and whether it was in a predefined urban versus rural zone.

5.2.2.2.3 Additional Screening Criteria

After researching candidate BMPs with regard to the effect on the pollutant of concern, planners should have enough information to analyze each management opportunity using appropriate and locally applicable screening criteria (see example in Table 13). Screening criteria are typically based on pollutant type, source area(s), performance/effectiveness, capital and O&M costs, and so on.

Table 13. Example of screening criteria for stormwater management practices

Screening criteria	Description
Volume reduction/source controls	Consider the role volume plays in contributing to elevated pollutant loads. Determine the extent to which rate and volume of flow can be retained or reduced on-site.
Location of the management practice within the critical area/watershed landscape	Check to see if the candidate management practice can help implement the load reductions that were identified in one of the critical areas of the watershed.
Estimated load reductions	Using the information you collected during desktop and field scoping, document whether the anticipated load reduction is low, medium, or high.
Legal and regulatory requirements	Identify legal or regulatory requirements for projects, and determine whether any pose significant constraints.
Property ownership	Determine the numbers of property owners that need to agree to installation or implementation of the management practice(s). It is often easier to obtain easements on lands in public ownership.
Site access	Consider whether you will be able to physically access the site and identify a contact to obtain permission if private property must be traversed to access the site. Consider whether maintenance equipment (e.g., front-end loaders, vacuum trucks) will be able to reach the site safely. Designs and cost estimates might require adjustment if a structural control requires hand-cleaning because of maintenance access constraints.
Added benefits	In addition to their intended design, management practices can also provide secondary benefits by controlling other pollutants, depending on how the pollutants are generated or transported. For example, practices that reduce erosion and sediment delivery often reduce phosphorus losses because phosphorus is strongly adsorbed to silt and clay particles.
Unintended effects	In some cases, management practices that are used to control one pollutant could inadvertently increase the generation, transport, or delivery of another pollutant.

Screening criteria	Description
Physical factors	There are many physical factors that can determine whether you will be able to install management practices. Look for constraints such as steep slopes, wetlands, high water tables, and poorly drained areas. Also look for opportunities such as open space, existing management practices that can be upgraded, outfalls where management practices could be added, and well-drained areas.
Infrastructure	Look for sites that have few utilities, road crossings, buried cables, pipelines, parking areas, or other significant physical constraints that could preclude installation or cause safety hazards.
Costs	The appropriateness of a management practice for a site can be affected by economic feasibility considerations that encompass short- and long-term costs. Short-term costs include installation costs, while long-term costs include continued O&M.
Social acceptance	Consider how nearby landowners will perceive the management practice. Will it cause nuisances such as localized ponding of water or vector control problems? Can these issues be addressed in the siting and design of the practice? How can nearby residents be involved in selecting and designing the practice to address their concerns? The optimal method for evaluating site feasibility for both riparian and upland management practices is through a site visit.

5.2.2.2.4 BMP Site Selection

In most instances, it is likely that sources acting as stormwater planners, rather than TMDL and permit writers or other entities at the state or EPA Regional level, will focus on identifying the most appropriate geographic location for siting and installing structural BMPs or conducting nonstructural BMPs. Factors affecting BMP siting decisions might include local conditions such as slopes, soils, and critical areas; historical, current, and future land uses; property ownership; cost; site access; infrastructure considerations; and social acceptance. Therefore, state or EPA Regional stormwater planners should either work closely with sources if the strategy includes making siting recommendations or consider leaving siting decisions to sources altogether.

Stormwater planners can use, recommend, or require desktop and field reconnaissance to scope the possible additional BMPs appropriate for addressing the pollutants of concern and the potential geographic locations for implementing these additional BMPs. This information can be gathered during the initial phase of determining the location of existing BMPs. The reconnaissance usually involves locating and mapping the likely source areas for the TMDL listed pollutants, identifying candidate BMPs that might be used to address them, and screening possible BMP installation sites—or, in the case of nonstructural BMPs (e.g., erosion control, pavement sweeping, IDDE, materials management)—scoping potential policy practices to address the problems identified.

After identifying pollutant sources cited in the TMDL, stormwater planners might consider recommending areas where appropriate management measures can likely implement the greatest pollutant load reductions, or requiring sources to identify these areas. These so-called *critical areas* are at or near pollutant source areas, and could include places with severe upland or channel erosion, sites generating oil and grease or other toxics, extensively paved subwatersheds or small catchments requiring runoff volume controls, areas with a high density of illicit connections, parks that generate significant bacteria loads from pets, industrial facilities generating high pollutant loads, and similar locations.

Stormwater treatment via multiple, consecutive BMPs can significantly improve the quality of water discharged to urban rivers, lakes, streams, wetlands, and coastal waters. In general, stormwater treatment

trains should seek to address source controls and infiltration, evapotranspiration and reuse first, then large particles, and, finally, small particles. The specific pollutant removal role of the second or third facility in a treatment train often assumes that significant settling or removal of solids has already occurred. For example, phosphorus removal using a two-facility treatment sequence relies on the second facility (e.g., sand filter) to remove a finer fraction of solids than those removed by the first facility. Oil control facilities must be upstream of treatment facilities and as close to the source of oil-generating activities as possible. They should also be upstream of detention facilities, if possible.

5.2.3. Monitoring and Assessing Implementation Progress (Key Questions 4-5)

After identifying the suite of BMPs appropriate for addressing the remaining pollutant load reduction to implement the WLA, stormwater planners will need to rely on the sources to undertake the necessary steps to implement the final set of BMPs. At this point, stormwater planners can provide recommendations and requirements that focus on assessing BMP performance to determine if the additional controls are producing the expected pollutant load reductions. To accomplish this, stormwater planners should consider what recommendations and requirements can promote iterative improvements using an adaptive management framework. The key questions that planners should help sources answer include the following:

4. How should permittees measure BMP performance as implementation proceeds?
5. Are measured pollutant load reductions adequate to make progress toward the assigned WLA?

5.2.3.1. Answering Key Question 4: Monitoring and Assessing Implementation of Additional BMPs

This set of questions summarizes the basic activities related to conducting an adaptive management approach. It is important to remember that the ultimate goal of stormwater management driven by implementing a WLA is to meet the water quality criteria associated with the designated use(s) of the relevant waterbody. The iterative approach of stormwater management implementation allows for sources to make progress toward that goal over time. Therefore, it is imperative that stormwater planners provide sources with recommendations and requirements related to assessing the performance of BMPs and overall SWMPs and SWPPPs and how to use assessment information to make meaningful changes to management strategies that can ensure further progress.

Stormwater planners can generate monitoring and assessment recommendations and requirements that can encourage sources to periodically evaluate BMP implementation and review monitoring and assessment information to track progress toward implementing WLAs. To comprehensively evaluate implementation activities, stormwater planners need to consider a combination of both process and

Tip: Consider best placement of treatment trains

There is some uncertainty regarding whether treatment facilities should be placed upstream or downstream of detention facilities that are needed for flow control purposes. In general, all treatment facilities can be installed upstream of detention facilities, although presettling basins are needed for sand filters and infiltration basins. However, not all treatment facilities can function effectively if located downstream of detention facilities. Those facilities that treat unconcentrated sheet flows, such as filter strips and narrow biofilters, are usually not practical downstream of detention facilities because of a variety of factors, including the sheer volume that must be treated.

summative analyses. A process analysis is one that tracks progress, assesses the quality of data relative to measurement quality objectives (i.e., whether the data are of sufficient quality to answer the monitoring question), and provides early feedback on trends, changes, and problems in the watershed. The summative analysis is more intensive and determines the status, changes, trends, or other issues that measure the environmental response to BMP implementation, as well as overall SWMP and SWPPP implementation.

The California Stormwater Quality Association (CASQA) developed the *Municipal Stormwater Program Effectiveness Assessment Guidance* (CASQA 2007) to assist municipal stormwater program managers in designing and conducting program effectiveness assessments using a range of assessment methods. The document also describes how to use these methods on the basis of program-specific desired outcomes and goals. Figure 21 (labeled Figure 2 in the CASQA guidance document) shows the outcome levels described with associated effectiveness assessments. Levels 1 to 4 are evaluated through *Implementation Assessments* and Levels 5 to 6 are evaluated through *Water Quality Assessments*. An MS4 would typically use Levels 1-4 to determine if programmatic targets or goals are being met.

Evaluations like the ones described in the CASQA document or those typically conducted by permitting authorities to determine an MS4's compliance with permit requirements and SWMP obligations typically do not *quantify* the level of effectiveness. They typically assess whether the MS4 is meeting the goals of the permit to the MEP. (For a discussion of MEP, see Chapter 2) This quantification or characterization in a manner that can be compared to the goals in a TMDL is the greatest challenge when trying to determine if an MS4 program is making progress toward a WLA. The best, most appropriate method to accomplish this can vary greatly among MS4s according to the types of BMPs and pollutant being limited by the TMDL.

> ***Resources:*** For more information on stormwater program evaluation, refer to the Resources list at the end of this chapter in Section 5.3.7.

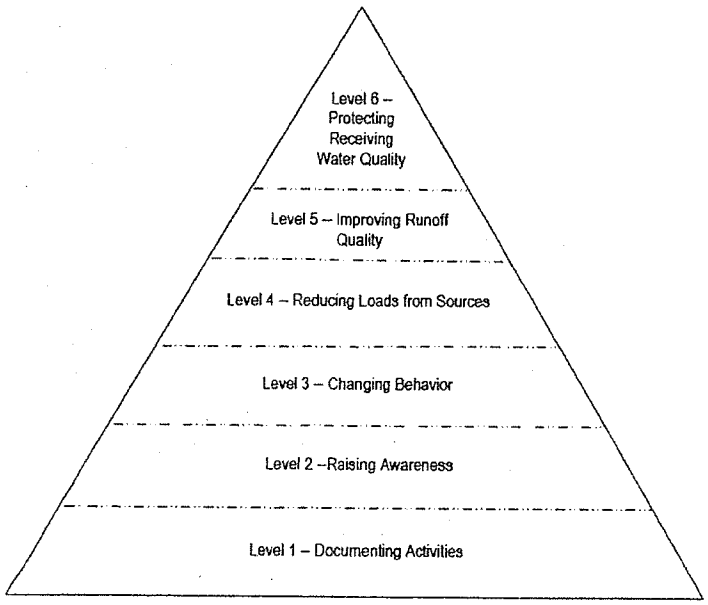

Figure 21. Approaches to evaluating storm water program effectiveness. (Source: CASQA 2007)

In Practice: Developing a Monitoring Program to Assess BMP Effectiveness in Addressing Pathogens in the Middle Rio Grande, New Mexico (2002)

Middle Rio Grande TMDL for fecal coliform recommends that MS4s, "[d]evelop and implement a monitoring program to assess BMP effectiveness and to compare loadings to the targets." The Albuquerque MS4 permit, based on this recommendation in the TMDL, requires the city to develop a monitoring program to track trends in fecal coliform and BMP effectiveness to track compliance with the TMDL WLA; to use an adaptive management approach by implementing revisions to the required programs if deemed necessary on the basis of monitoring data; and to develop and submit BMP evaluations and assessments, as well as an Annual TMDL Progress Report that summarizes monitoring results and includes computations of annual percent reduction achieved from the baseline loads and comparisons with the target loads.

In Practice: Working with Stakeholders on Adaptive Management for Swamp Creek, Washington

The Swamp Creek TMDL (2006) includes language that requires the Washington Department of Ecology to annually meet with municipal stakeholders to, "share information on the state of water quality in the watershed and status of implementation activities. Water quality data, trends (where applicable), regulatory changes, new and innovative concepts, and funding sources will be discussed to evaluate the overall status of the TMDL. Ecology will solicit input from the workgroup at this time to help direct the adaptive management of this TMDL. Ecology will track implementation no less than annually using the tracking table in Appendix E and through municipal stormwater permit program audits."

In Practice: Permit Requirements for Establishing Pollutant Load Reduction Benchmarks for Columbia Slough, Oregon

The Columbia Slough TMDL (1998) states that monitoring and implementation of BMPs will be done by MS4s to comply with the BOD_5 WLA. The Phase I MS4 permit for the city of Gresham, city of Fairview, and Multnomah County specifies BMP requirements to implement the WLA to the MEP. The Oregon Department of Environmental Quality created an MS4 permit benchmarking approach that applies to all TMDL parameters for which stormwater WLAs were established. Benchmarks are estimates of future pollutant load reductions. The permit requires that the benchmarks and necessary BMPs be included in the MS4 SMWP. The permit defines a benchmark as follows:

> A benchmark is a total pollutant load reduction estimate for each parameter or surrogate, where applicable, for which a WLA is established at the time of permit issuance. A benchmark is used to measure the overall effectiveness of the stormwater management plan in making progress toward the WLA (this estimate will be related to the statistical variability of the underlying data and may be stated as a range), and is intended to be a tool for guiding adaptive management activities. A benchmark is not a numeric effluent limit; rather it is a goal that is subject to the maximum extent practicable standard. The co-permittee must provide the rationale for the proposed benchmark, which includes an explanation of the relationship between the benchmarks and the TMDL wasteload allocations. Any limiting factors related to the development of a benchmark, such as data availability and data quality, must also be included in this rationale.

The Phase I permit requires that a monitoring plan be designed to track the long-term progress of the SWMP toward achieving improvements in receiving water quality, including progress toward implementing pollutant load reduction benchmarks associated with TMDL constituents. This requirement is addressed with the ambient and outfall monitoring that is conducted, and assessed as part of the data evaluation and reporting components of the program that occur during each permit renewal application. The permit also requires that results of the monitoring be used to support the adaptive management process and lead to refinements of the SWMP.

To ensure a successful adaptive management process, both water quality and BMP performance monitoring data should be assessed fairly frequently (e.g., as part of the SWPPP/SWMP evaluation process). Progress reports and regular team meetings are two effective ways to accomplish this. Even though frequent evaluations of BMP performance and water quality data might seem demanding, early indications of trends or problems can prevent major future problems.

The best use of monitoring data can depend on a variety of factors, including the type of permittee, geographic size of the permittee and the impairment(s). However, there are three basic types of monitoring that could be used—BMP monitoring, outfall monitoring, and receiving water monitoring.

- **BMP Monitoring.** There are several options for assessing BMP performance, including BMP monitoring. The University of Minnesota's *Assessment of Stormwater Best Management Practices* provides a process for developing and implementing a BMP assessment program that includes four levels of assessment: (1) visual inspections, (2) capacity testing, (3) synthetic runoff testing, and (4) monitoring. Monitoring is considered the most accurate method for assessing BMP volume reduction, peak flow reduction, and pollutant removal efficiency. Procedures for each level of BMP assessment can vary by the type of BMP. As previously stated, certain types of structural BMPs lend themselves well to direct monitoring (e.g., discharge from a stormwater pond). Data from these types of BMPs should be collected to the extent possible and used to determine if the BMPs are performing as expected and if this is adequate. If there is a large number of BMPs, it will likely be more appropriate to sample a representative number and extrapolate the results to the rest.

  Resources: For more information on BMP monitoring, refer to the Resources list at the end of this chapter in Section 5.3.8.

- **Outfall Monitoring.** Permittees of small geographic size (i.e., construction project or industrial facility) with few outfalls might be able to monitor the effluent and directly measure whether the facilities' contribution has been reduced adequately to implement the applicable WLA. Monitoring outfalls of large permittees (i.e., MS4s) might not provide any useful data for adaptive management of specific BMPs but could help to determine geographic areas or isolated land use types that might need further attention if the monitoring reveals inadequate progress toward TMDL goals. Data from outfall monitoring can also serve as an indicator to determine if more structural or nonstructural BMPs are needed in the area contributing flow to the outfall (e.g., data from one outfall demonstrates inferior BMP performance versus other outfalls).

  Resources: For more information on stormwater outfall monitoring, refer to the Resources list at the end of this chapter in Section 5.3.9.

- **Receiving Water Monitoring.** Because the ultimate purpose of the TMDL and subsequent implementation efforts is to improve receiving water quality, it might be in the best interests of permittees to conduct their own ambient monitoring. For example, larger permittees with adequate resources could regularly monitor receiving water to evaluate trends, confirm significant sources, and potentially update and improve existing models. As previously described, the CASQA *Municipal Stormwater Program Effectiveness Assessment Guidance* provides information on water quality assessments to help determine what effect BMPs are having on receiving water quality. A list of other monitoring-related resources is also provided at the end of this section.

  Resources: For more information on receiving water monitoring, refer to the Resources list at the end of this chapter in Section 5.3.10.

In Practice: Using Receiving Water Monitoring to Demonstrate Progress in the Los Angeles River, California

Receiving water monitoring is required to demonstrate a permittee is implementing the WLAs in the Los Angeles River and Tributaries Metals TMDL. This TMDL includes an implementation plan which states the following:

> Each municipality and permittee will be required to meet the storm water waste load allocations shared by the two MS4s and Caltrans permittees at the designated TMDL effectiveness monitoring points. [...] The MS4 and Caltrans stormwater NPDES permittees will be found to be effectively meeting dry-weather waste load allocations if the in-stream pollutant concentration or load at the first downstream monitoring location is equal to or less than the corresponding concentration- or load-based waste load allocation. Alternatively, effectiveness of the TMDL may be assessed at the storm drain outlet based on the waste load allocation for the receiving water. For storm drains that discharge to other storm drains, the waste load allocation will be based on the waste load allocation for the ultimate receiving water for that storm drain system. The MS4 and Caltrans stormwater NPDES permittees will be found to be effectively meeting wet-weather waste load allocations if the loading at the downstream monitoring location is equal to or less than the wet-weather waste load allocation.

5.2.3.2. Answering Key Question 5: Determining Whether Implementation Progress is Adequate

After quantifying the pollutant load reduction gains made through implementing existing and additional BMPs, stormwater planners should assist sources in determining if the current SWMP and SWPPP are adequate to implement the WLA over time. To answer this question, however, both stormwater planners and sources need guidance or criteria for judging progress, information that ideally should be first presented in the TMDL and permit. Therefore, TMDL and permit writers should consider how to define progress, which is likely to vary by pollutant, permittee type, and other potential factors such as compliance determination methods by the permitting authority.

Options for defining progress toward implementing the WLA are as follows:

- Demonstrating pollutant load reductions by an agreed on date
- Demonstrating pollutant concentration reductions by a particular date
- Implementing a set of prescribed BMPs with specific performance standards by a particular date
- Complying with the permit SWMP or SWPPP requirements during the permit term

Stormwater planners should be aware that current TMDLs and permits use a variety of these approaches to define progress, while still other TMDLs and permits remain silent on the issue of progress. If the TMDL and the permit do not provide a definition of how to determine progress, stormwater planners can consider developing recommendations and requirements to help sources create and justify their own progress milestones or benchmarks. Stormwater planners can specify the nature of the benchmarks (e.g., quantifiable) and determine supporting information sources should submit to justify and verify the validity and accuracy of the selected benchmarks. Most importantly, TMDL and permit writers need to remember the iterative, dynamic nature of SWMP and SWPPP implementation when crafting TMDL and permit requirements. Where possible, defining a framework approach, including goals, for assessing progress and allowing the sources to determine the details (with adequate evaluation through the SWMP and SWPPP) is going to be more useful than trying to identify a detailed approach at the state level.

(Chapter 6 provides a brief discussion on compliance schedules—an important factor to consider when evaluating overall progress.)

In Practice: Including Specific Criteria for Assessing Progress in the Los Angeles MS4 Permit

The Santa Monica Bay Beaches dry weather bacteria TMDL is expressed in terms that are directly applicable to MS4s and the associated WLA is included in the Los Angeles MS4 permit. This provides the permittees a clear understanding of what must be accomplished to implement the WLA. The permit language (Provision 29 of Order 01-182) is as follows:

> The Waste Load Allocations (WLAs) in the Dry Weather Bacteria TMDL are expressed as the number of allowable days that the Santa Monica Bay beaches may exceed the Basin Plan water quality objectives for protection of Water Contact Recreation (REC-1) in marine waters, specifically the water quality objectives for bacteria.... Tables 7-4.1, 7-4.2a, and 7-4.3 of the [Los Angeles River] Basin Plan set forth the pertinent provisions of the Dry Weather Bacteria TMDL. They require that during Summer Dry Weather there shall be no exceedances in the Wave Wash of the single sample or the geometric mean bacteria objectives set to protect the Water Contact Recreation (REC-1) beneficial use in marine waters. Accordingly, a prohibition is included in this Order barring discharges from a MS4 to Santa Monica Bay that result in exceedance of these objectives. Since the TMDL and the WLAs contained therein are expressed as receiving water conditions, Receiving Water Limitations have been included in this Order that are consistent with and implement the zero exceedance day WLAs.
>
> [Provision 32] These Receiving Water Limitations apply at the compliance monitoring sites identified in the Santa Monica Bay Beaches Bacterial TMDLs Coordinated Shoreline Monitoring Plan dated April 7, 2004.1 Compliance with the Receiving Water Limitations shall be determined using shoreline monitoring data obtained in conformance with the Santa Monica Bay Beaches Bacterial TMDLs Coordinated Shoreline Monitoring Plan dated April 7, 2004.

In Practice: Allowing Sources to Establish Benchmark Values for Pollutants in the City of Gresham, Oregon

The MS4 permit for the City of Gresham requires that the permittees develop benchmark values for applicable TMDLs. The permit language is as follows:

> Schedule D.2.(d)
>
> i) Progress toward reducing TMDL pollutant loads must be evaluated by the co-permittee through the use of performance measures and pollutant load reduction benchmarks developed and listed in the SWMP.
>
> (1) ...
>
> (2) A benchmark is a total pollutant load reduction estimate for each parameter or surrogate, where applicable, for which a [Waste Load Allocation] WLA is established at the time of permit issuance. A benchmark is used to measure the overall effectiveness of the storm water management plan in making progress toward the wasteload allocation (this estimate will be related to the statistical variability of the underlying data and may be stated as a range), and is intended to be a tool for guiding adaptive management activities. A benchmark is not a numeric effluent limit; rather it is a goal that is subject to the maximum extent practicable standard. The co-permittee must provide the rationale for the proposed benchmark, which includes an explanation of the relationship between the benchmarks and the TMDL wasteload allocations. Any limiting factors related to the development of a benchmark, such as data availability and data quality, must also be included in this rationale. The Interim Evaluation Report City of Gresham & Co-permittees (May 1, 2006, 4.0 Benchmark.Evaluation for Gresham) summarizes the benchmarking process developed by the City of Gresham for TMDLs within the Columbia Slough.

In Practice: Specifying Pollutant Concentrations and BMPs Necessary to Make Adequate Progress in Oregon

The state of Oregon includes two options in the general permit for construction activities (www.deq.state.or.us/wq/stormwater/constappl.htm) that must be implemented to meet the goals of any turbidity or sediment TMDL—either meeting a benchmark concentration in the runoff established by the permitting authority or implementing a set of BMPs specific to the pollutant of concern. The exact permit language follows:

> 2. Water Quality Requirements for TMDL and 303(d) Listed Waterbodies
>
> In addition to other applicable requirements of this permit, if sediment or turbid water from a permit registrant's construction project has the potential to discharge into waterbodies that are listed for turbidity or sedimentation on the most recently EPA-approved Oregon 303(d) list or that have an established Total Maximum Daily Load (TMDL) for sedimentation or turbidity, the permit registrant must implement one of the two following sets of actions, in accordance with Schedule C.
>
> a. Option #1: Collect and analyze samples for turbidity in stormwater runoff from the construction site as required by Condition B.2. (p. 12) and compare the results to the benchmark value of 160 Nephelometric Turbidity Units (NTUs). The benchmark is used to determine if best management practices are effective; it is not an effluent limit. If any stormwater sample exceeds the benchmark, then the permit registrant must evaluate the best management practices (BMPs) and the adequacy of the ESCP and take corrective actions. If after such actions have been implemented and sample results still exceed the 160 NTU benchmark, the requirements of Option #2 below must be followed, and the permit registrant must submit an Action Plan to the department identifying the selected BMP(s) that will be implemented and the rationale for choosing the selected BMP(s).
>
> b. Option #2: In addition to the applicable BMPs required by Condition A.7., implement one or more of the following BMPs to control and treat sediment and turbidity:
>
> i. Compost berms, compost blankets, or compost socks;
>
> ii. Erosion control mats (rolled or blown);
>
> iii. Tackifiers used in combination with perimeter sediment control BMPs;
>
> iv. Established vegetated buffers sized at 50 feet plus 25 feet per 5 degrees of slope;
>
> v. Water treatment by electro-coagulation, chemical flocculation, or filtration; or
>
> vi. Other substantially equivalent sediment or turbidity BMP approved by the department.
>
> The selected BMP(s) must be specifically identified in the ESCP [erosion and sediment control plan] as addressing this condition of the permit, and the rationale for choosing the selected BMP(s) must also be provided.

In this example, the permittee has two choices for demonstrating that the construction project is implementing the goals of the TMDL. The permittee would either need to apply Option A and monitor the effluent per the requirements of the permit to show that the benchmark turbidity value is being met at the construction project. Or the permittee would need to demonstrate through inspection reports, that the BMPs required in a basic SWPPP as well as the additional BMPs defined by Option B are implemented and operating as designed on the site.

5.2.4. Adjusting Implementation for Continuous Improvements (Key Question 6)

Adaptive management focuses on learning from the information gathered through monitoring and assessment and making changes to implementation strategies on the basis of the information collected. Sources can continue to implement BMPs, as well as overall SWMPs and SWPPPs, if the information gathered through the process and summative analyses show the necessary progress toward implementing the WLA. If progress is not adequate, planners should develop recommendations and requirements that will allow sources to answer key question 6:

5.2.4.1. Answer Key Question 6: Identifying Modifications to Implementation Strategy

Because the adaptive management approach is not linear but iterative, TMDL and permit writers can develop recommendations and requirements for sources that focus on taking the information from key questions 4 and 5 to adjust the current implementation strategy. This could entail conducting an efficiency audit of existing BMPs to determine if they are properly installed, operated, and maintained, or recommend that sources identify the most effective BMPs after a set number of years of operation (so that these most effective BMPs are used in the future). In addition, modifications could involve revisiting key question 3 to determine if additional BMPs are necessary to make continuous improvements. Adaptive management actions might include retrofitting or adjusting previously installed BMPs that are not performing as expected or compiling lessons learned from implementation activities to help in future implementation planning.

It is important to note that permit writers include requirements that can facilitate adaptive management activities in existing individual and general stormwater permits, such as recording keeping and reporting requirements associated with inspections and, where applicable, monitoring activities. For example, construction stormwater permits might include requirements to conduct weekly stormwater monitoring and visual BMP inspections; where information from these activities show BMPs are not performing adequately, stormwater sources must modify the SWPPP accordingly. MS4 stormwater permits contain requirements for developing annual SWMP reports that assess the performance of BMPs and include detailed information on planned modifications. While these permit requirements might not have an explicit link to WLAs, sources should already have experience in collecting and analyzing performance information and applying that information to improve the effectiveness of SWPPPs and SWMPs.

5.3. Resources

5.3.1. BMP Inventory

1. USEPA (U.S. Environmental Protection Agency). 2007. *Municipal Separate Storm Sewer System (MS4) Program Evaluation Guidance*. U.S. Environmental Protection Agency, Office of Wastewater Management. EPA-833-R-07-003 (field test version) www.epa.gov/npdes/pubs/ms4guide_withappendixa.pdf and www.epa.gov/npdes/pubs/ms4guide_appendicesb-d.pdf

This document is available to assist in assessing the compliance and effectiveness of Phase I and Phase II MS4 stormwater programs, including compiling a comprehensive BMP inventory. Sources can also use this document to conduct self-audits of SWMPs.

5.3.2. BMP Selection

1. ASCE (American Society of Civil Engineers). 2001. *Guide for Best Management Practice Selection in Urban Developed Areas*. American Society of Civil Engineers, Reston, VA. www.asce.org/bookstore/book.cfm?book=4058

   This guide examines permanent structural techniques which can be used for retrofitting the stormwater management systems in existing developed areas.

2. Washington Department of Ecology. 2005. *Stormwater Management Manual for Western Washington*. Washington Department of Ecology, Olympia, WA. www.ecy.wa.gov/programs/wq/stormwater/manual.html

   This manual focuses on the applicability, technical design, construction, and maintenance of a range of stormwater management practices for use in western Washington to achieve water quantity and water quality control.

3. Maryland Department of the Environment. 2000. *Maryland Stormwater Design Manual*. Maryland Department of the Environment, Baltimore, MD. www.mde.state.md.us/Programs/WaterPrograms/SedimentandStormwater/stormwater_design/index.asp

   This manual focuses on the applicability, technical design, construction, and maintenance of a range of stormwater management practices for use in Maryland to achieve water quantity and water quality control.

4. New Jersey Department of Environmental Protection. 2004. *New Jersey Stormwater Best Management Practices Manual*. New Jersey Department of Environmental Protection, Trenton, NJ. www.njstormwater.org/bmp_manual2.htm

   This manual focuses on the applicability, technical design, construction, and maintenance of a range of stormwater management practices for use in New Jersey to achieve water quantity and water quality control.

5. University of Wisconsin – Extension. 2000. *Wisconsin Stormwater Manual: Technical Design Guidelines for Stormwater Management Practices*. University of Wisconsin Extension, Madison, WI. http://learningstore.uwex.edu/Wisconsin-Storm-Water-Manual-P603C123.aspx.

   This manual focuses on the applicability, technical design, construction, and maintenance of a range of stormwater management practices for use in Wisconsin to achieve water quantity and water quality control.

6. Center for Watershed Protection. 2003-2008. Urban Subwatershed Restoration Manual Series. Center for Watershed Protection, Ellicott City, MD. www.cwp.org/Store/usrm.htm.

This 11 manual series covers the seven major practices used to restore urban watersheds: stormwater retrofits, stream repair, riparian management, discharge prevention, pollution source controls, watershed forestry and municipal operations. In addition, the series outlines new methods for desktop and field assessment and stakeholder management to develop effective small watershed restoration plans, and presents an integrated framework for urban watershed restoration.

5.3.3. Volume Control

1. Zomodi, K. 2007. *Effectiveness of Time of Concentration Elongation on Peak Flow Reduction.* 2nd National Low Impact Development Conference, March 12–14, 2007. www.bae.ncsu.edu/topic/lidconference07/A6/A6.4.Effectiveness%20of%20Time%20of%20Concentration%20Elongationon%20on%20Peak%20Flow%20Reduction.pdf

   This presentation discusses the findings of a study intended to theoretically evaluate the relative impact of time of concentration elongation on peak flow reduction under typical conditions of LID use.

2. Stein, Eric D. 2005. *Effect of Increases in Peak Flows and Imperviousness on Stream Morphology of Ephemeral Streams in Southern California.* Technical Report 450. Southern California Coastal Water Research Project, Westminster, CA. www.environmental-expert.com/files/19961/articles/4562/4562.pdf.

   This technical report investigates the effects of urbanization on ephemeral or intermittent streams in Southern California. The study seeks to (from the document) establish a stream channel classification system for Southern California streams, assess stream channel response to watershed change, develop deterministic/predictive relationship between changes in IC and stream channel enlargement and provide a conceptual model of stream channel behavior that may be used as the basis for a future numeric model. Eight watersheds and eleven sites were selected for study.

5.3.4. Green Infrastructure and Low Impact Development

1. Horner, R., C. May, E. Livingston, D. Blaha, M. Scoggins, and J. Tims. (n.d.). *Structural and Non-Structural BMPs for Protecting Streams.* Watershed Management Institute, Crawfordsville, FL. www.chesterfield.gov/CommunityDevelopment/Engineering/LIDGrant/Studies/HornerMay2001Paper.pdf

   This paper presents findings from a study of the effects of non-structural BMPs, including riparian buffers and retention of natural wetlands, on three stream ecosystems to help guide application of these practices in low-impact urban design.

2. Kloss, C, and C. Calarusse. 2006. *Rooftops to Rivers: Green Strategies for Controlling Stormwater and Combined Sewer Overflows.* Natural Resources Defense Council, New York City, NY. www.nrdc.org/water/pollution/rooftops/contents.asp

This policy guide provides decisionmakers with ideas on how to incorporate green strategies into urban landscapes to address the effects of wet weather on water quality. Includes nine case studies.

3. USEPA (U.S. Environmental Protection Agency). 2008. *Incorporating Green Infrastructure Concepts into Total Maximum Daily Loads.* U.S. Environmental Protection Agency, Washington, DC. www.epa.gov/owow/tmdl/stormwater/

   This 11 page fact sheet provides recommendations for incorporating GI and LID concepts into various elements of a TMDL and provides two TMDL case studies.

5.3.5. BMP Performance Literature Values

1. American Society of Civil Engineers' (ASCE) and EPA's International Stormwater BMP Database: www.bmpdatabase.org/

   The database contains more than 300 BMP studies, performance analysis results, tools for use in BMP performance studies, monitoring guidance and other study-related publications. The overall purpose of the project is to provide scientifically sound information to improve the design, selection, and performance of BMPs. Continued population of the database and assessment of its data will ultimately lead to a better understanding of factors influencing BMP performance and help to promote improvements in BMP design, selection and implementation.

2. FHWA (Federal Highway Administration). 2002. *Stormwater Best Management Practices in an Ultra-Urban Setting: Selection and Monitoring.* Federal Highway Administration, Landover, MD. www.fhwa.dot.gov/environment/ultraurb/

   The purpose of this document is to provide a planning-level review of the applicability and use of new and more traditional BMPs in ultra-urban areas. The document presents data, design criteria, and monitoring study results on BMPs implemented in ultra-urban areas

3. Pitt, R.E., A. Maestre, and R. Morquecho. 2004. The National Stormwater Quality Database (NSQD, version 1.1). University of Alabama, Tuscaloosa, AL. http://unix.eng.ua.edu/~rpitt/Research/ms4/mainms4.shtml and http://unix.eng.ua.edu/~rpitt/Research/ms4/Paper/recentpaper.htm

   These stormwater quality data and site descriptions are to describe the characteristics of national stormwater quality, provide guidance for future sampling needs, and enhance local stormwater management activities in areas having limited data. The monitoring data was collected over nearly a 10-year period from more than 200 municipalities throughout the country. This project is creating a national database of stormwater monitoring data collected as part of the existing stormwater permit program, providing a scientific analysis of the data, and providing recommendations for improving the quality and management value of future NPDES monitoring efforts.

4. University of Massachusetts Amherst's Massachusetts Stormwater Technology Evaluation Project (MASTEP), Stormwater Technologies Clearinghouse: www.mastep.net/

   This searchable database contains validated performance data and technical information on innovative stormwater treatment technologies. The Technology Acceptance and Reciprocity

Partnership (TARP) protocol is the basis for evaluating treatment efficiencies for various pollutants and the Web site is designed to help stakeholders interpret information such as site and environmental considerations as well as whether performance studies meet the minimum TARP requirements. It also serves as a repository for test reports and performance data from a variety of sources.

5. Fraley-McNeal, F., T. Schueler, and R. Winer. 2008. National Pollutant Removal Performance Database Technical Brief (Version 3.0). Center for Watershed Protection, Ellicott City, MD. www.cwp.org/Resource_Library/Center_Docs/SW/bmpwriteup_092007_v3.pdf

   The updated database was statistically analyzed to derive the median and quartile removal values for each major group of stormwater BMPs. The data are presented as box and whisker plots for the various pollutants found in stormwater runoff.

6. EPA's Urban BMP Performance Tool: http://cfpub.epa.gov/npdes/stormwater/urbanbmp/bmpeffectiveness.cfm

   Based largely on data from the International Stormwater BMP Database, this tool allows users to search BMP study summaries based on the pollutants measured, BMPs examined, or total volume of stormwater runoff reduced. Search results are displayed in a tabular format sorted by effluent concentration, and additional details on each study can be accessed by clicking on the study title. The Urban BMP Performance Tool also includes background information about BMP performance, including basic information on understanding how BMP affect concentration, volume and total load.

7. University of New Hampshire Stormwater Center, Nonpoint Education for Municipal Officials (NEMO), Innovative Stormwater Management Inventory Database: www.erg.unh.edu/stormwater/index.asp

   This searchable and amendable database highlights innovative stormwater management techniques such as low impact design, used in New England. The database contains information on bioretention areas, green roofs, rain gardens, detention pond retrofits, tree filters, and constructed wetlands.

5.3.6. Model Applicability

1. USEPA. 2005. *TMDL Model Evaluation and Research Needs*. EPA/600/R-05/149. U.S. Environmental Protection Agency, Office of Research and Development, National Risk Management Research Laboratory, Cincinnati, OH. www.epa.gov/nrmrl/pubs/600r05149/600r05149.htm

   This report documents the review of more than 60 available watershed and receiving water models for their applicability to TMDL development and implementation. It discusses model selection on the basis of model capabilities and provides a series of tables rating the capabilities or applicability the models using the categories of TMDL endpoints, general land and water features, special land processes, special water processes, and application considerations. The document also provides individual fact sheets for each reviewed model.

2. USEPA. 1997. *Compendium of Tools for Watershed Assessment and TMDL Development*. EPA 841-

B-97-006. U.S. Environmental Protection Agency, Office of Water, Office of Wetlands, Oceans, and Watersheds, Washington, DC. www.epa.gov/owow/tmdl/comptool.html

This document reviews more than 50 watershed, receiving water and ecological assessment models. The document provides factsheets for each model that describes model components, methods, applications, pollutants addressed, limitations, input data requirements, and type of output. The document also contains information on model selection for specific applications, model calibration, and model verification.

3. USEPA (U.S. Environmental Protection Agency).2008. *Handbook for Developing Watershed Plans to Restore and Protect Our Waters*. U.S. Environmental Protection Agency, Washington, DC. www.epa.gov/nps/watershed_handbook/

Chapter 8 of this document focuses on methods for estimating pollutant loads, including the use of watershed models. This chapter provides assistance in selecting and applying watershed models to estimate pollutant loads from existing conditions.

5.3.7. Stormwater Program Evaluation

1. CASQA (California Stormwater Quality Association). 2007. *Municipal Stormwater Program Effectiveness Assessment Guidance*. California Stormwater Quality Association, Menlo Park, CA. www.casqa.org

This document provides stormwater managers with a variety of stormwater program assessment strategies and methods appropriate for different stormwater program elements and outcome levels.

2. USEPA (U.S. Environmental Protection Agency). 2007. *Municipal Separate Storm Sewer System (MS4) Program Evaluation Guidance*. U.S. Environmental Protection Agency, Office of Wastewater Management. EPA-833-R-07-003 (field test version) www.epa.gov/npdes/pubs/ms4guide_withappendixa.pdf and www.epa.gov/npdes/pubs/ms4guide_appendicesb-d.pdf

This document is available to assist in assessing the compliance and effectiveness of Phase I and Phase II MS4 stormwater programs, including compiling a comprehensive BMP inventory. Sources can also use this document to conduct self-audits of SWMPs.

5.3.8. BMP Monitoring

1. Washington Department of Ecology. 2008. *Guidance for Evaluating Emerging Stormwater Treatment Technologies, Technology Assessment Protocol* (revised). Publication # 02-10-037. Washington Department of Ecology, Olympia, WA. www.ecy.wa.gov/biblio/0210037.html

This document's primary purpose is to establish a testing protocol and process for evaluating and reporting on the performance and appropriate uses of emerging stormwater treatment technologies. This document is also intended for use in evaluating public domain practices possibly resulting in changes to the design standards for these practices in the state's *Stormwater Management Manual*.

2. University of Minnesota. 2008. *Assessment of Stormwater Best Management Practices*. University of Minnesota, St. Paul, MN. http://wrc.umn.edu/outreach/stormwater/bmpassessment/assessmentmanual/

   This manual provides information on four levels of a BMP assessment program and provides assessment procedures for source reduction BMPs, filtration practices, infiltration practices, sedimentation practices, and biologically enhanced practices.

3. TARP (Technology Acceptance and Reciprocity Partnership). 2003. *TARP Protocol for Stormwater Best Management Practice Demonstrations*. Final August 2001. Updated July 2003. www.dep.state.pa.us/dep/deputate/pollprev/techservices/tarp/pdffiles/Tier2protocol.pdf

   This protocol describes a set of uniform criteria on evaluating stormwater BMP performance that is acceptable to the endorsing states (California, Massachusetts, Maryland, New Jersey, Pennsylvania, Virginia). The protocol primarily deals with the demonstration of BMPs that are designed for one or more of the following: (1) directing and distributing flows; (2) reducing erosive velocities; and (3) removing contaminants such as suspended or dissolved pollutants from collected stormwater through physical and chemical processes such as settling, media-filtering, ion-exchange, carbon adsorption, and precipitation.

4. Stricker, E., and M. Quigley (URS Greiner Woodward Clyde), ASCE (American Society of Civil Engineers), and USEPA (U.S. Environmental Protection Agency). 1999. *Determining Urban Stormwater Best Management Practice (BMP) Removal Efficiencies*. American Society of Civil Engineers, Urban Water Resources Research Council, City, ST, and U.S. Environmental Protection Agency, Office of Water, Washington, DC. www.bmpdatabase.org/docs/task3_1.pdf

   This technical memorandum provides an overview of methods for evaluating the efficiency, performance, and effectiveness of BMPs through analysis of water quality, flow, and precipitation data for monitored storm events as well as BMP design attributes collected and stored in the National Stormwater Best Management Practices Database.

5.3.9. Outfall Monitoring

1. USEPA (U.S. Environmental Protection Agency). 1992. *NPDES Stormwater Sampling Guidance Document*. EPA 833-B-92-001. U.S. Environmental Protection Agency, Washington, DC. www.epa.gov/npdes/pubs/owm0093.pdf

5.3.10. Receiving Water Monitoring

1. Stormwater Monitoring Coalition's Model Monitoring Technical Committee. 2004. *Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California. August 2004*. Technical Report #419. ftp://ftp.sccwrp.org/pub/download/PDFs/419_smc_mm.pdf

   This report describes a model monitoring program for receiving waters affected by urban runoff in both wet and dry weather.

2. USGS (U.S. Geological Survey). Variously dated. *National Field Manual for the Collection of Water-Quality Data*. U.S. Geological Survey Techniques of Water-Resources Investigations, book 9, chaps. A1-A9. U.S. Geological Survey, Reston, VA. http://pubs.water.usgs.gov/twri9A

This manual includes information and detailed descriptions of water quality sampling methods.

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Chapter Six
Coordinating TMDLs and Stormwater Permits

What's included in this chapter

- ✓ Discussion of the type of permit requirements (e.g., water quality controls and effluent limitations, monitoring and adaptive management, reporting) that permit writers can develop with input from TMDL writers.
- ✓ Options for connecting TMDLs and stormwater permit language.

What you should know after reading this chapter

- ✓ Possible approaches for conveying TMDL-specific recommendations through a general permit without reopening the permit.
- ✓ Options for incorporating TMDL recommendations by reference into stormwater permits to create enforceable permit requirements.

Potential roles and responsibilities under this activity

If you are a TMDL writer

1. Work with permit writers to determine if stormwater permits will reference recommendations in TMDL reports and, where applicable, implementation plans.
2. Develop recommendations and other language for TMDL reports and, where applicable, implementation plans that stormwater permits can incorporate by reference.

If you are a stormwater permit writer

1. Work with TMDL writers to determine what recommendations TMDL reports and, where applicable, implementation plans will contain that stormwater permits can incorporate by reference.
2. Develop appropriate stormwater permit language that implements approved WLAs and are consistent with WLA assumptions.

6. COORDINATING TMDLS AND STORMWATER PERMITS

Improving the communication between TMDLs and permit writers can result in more effective implementation of TMDLs into stormwater permits. Considerations for developing a connection between the TMDL and the stormwater permit can include the following:

- What type of permit requirements (e.g., water quality controls and effluent limitations, monitoring, reporting) can permit writers consider to facilitate implementation of stormwater WLAs?
- How can permit writers, with information provided by TMDL writers, describe these elements?
- What can each programmatic document (e.g., TMDL reports or stormwater permits) say in relation to the other to facilitiate TMDL implementation?

As discussed in Chapter 1 of this Handbook, TMDLs include technical analyses that are not self-implementing. For point sources, permit limits that are consistent with the WLA are enforceable through NPDES permits. It is the permit writer's responsibility to interpret and incorporate information from the TMDL into permits, thereby turning them into enforceable requirements. Stormwater permit writers therefore can incorporate data and information provided in the TMDL directly into the permit, or can include information indirectly (e.g., reference sections of the TMDL. As a result, TMDLs and permitscan work in tandem to identify effective implementation methods and make progress toward restoring impaired waters.

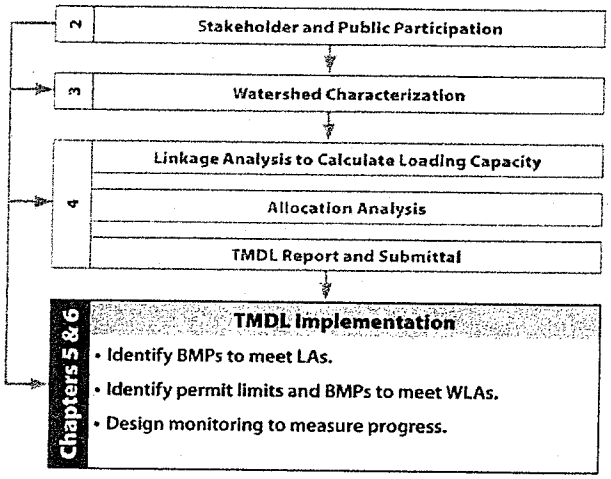

Figure 22. Illustration of the steps in the TMDL process, including activities related to TMDL implementation.

As shown in Figure 22, the step of TMDL implementation involves identifying and implementing management options to implement the LAs and WLAs. This chapter discusses ways to coordinate development of permit language with the information and data provided in the TMDL report to promote effective implementation of TMDLs through permits.

6.1. Options for Implementing TMDLs in Permits

Stormwater permit writers often consider TMDL-related information as they develop permit requirements such as applicability, implementing water quality controls through SWMPs and SWPPPs, developing a monitoring plan, reporting, and assessing progress. Under each of these permit elements, permit writers can consider a variety of options for expressing requirements related to TMDL implementation. The two primary types of stormwater permits—individual and general permits—can affect options and approaches for coordinating TMDL language with the permit.

Regulatory Requirements and EPA Guidance on Establishing Stormwater Permit Requirements to Implement WLAs

In the 2002 memorandum, *Establishing TMDL WLAs for Stormwater Sources and NPDES Permit Requirements Based on Those WLAs*, EPA provides regulatory requirements and guidance on how stormwater permit requirements should link to stormwater source WLAs under approved TMDLs. With regard to stormwater permit requirements, such as effluent limitations and monitoring, the 2002 memorandum states the following:

- NPDES permit conditions must be consistent with the assumptions and requirements of available WLAs. See 40 CFR 122.44(d)(1)(vii)(B).
- WQBELs for NPDES-regulated storm water discharges that implement WLAs in TMDLs may be expressed in the form of BMPs under specified circumstances. See 33 U.S.C. 1342(p)(3)(B)(iii); 40 CFR 122.44(k)(2)&(3). If BMPs alone adequately implement the WLAs, then additional controls are not necessary.
- EPA expects that most WQBELs for NPDES-regulated municipal and small construction storm water discharges will be in the form of BMPs, and that numeric limits will be used only in rare instances.
- When a non-numeric WQBEL is imposed, the permit's administrative record, including the fact sheet when one is required, needs to support that the BMPs are expected to be sufficient to implement the WLA in the TMDL. See 40 CFR 124.8, 124.9, and 124.18.
- The NPDES permit must also specify the monitoring necessary to determine compliance with effluent limitations. See 40 CFR 122.44(i). Where effluent limits are specified as BMPs, the permit should also specify the monitoring necessary to assess if the expected load reductions attributed to BMP implementation are achieved (e.g., BMP performance data).
- The permit should also provide a mechanism to make adjustments to the required BMPs as necessary to ensure their adequate performance.

Individual permits provide the permit writer with an opportunity to develop specific permit requirements because the permit focuses on one source, or a primary source and its co-permittees. As a result, permit writers can feasibly work with the TMDL writer in developing a permit that directly reflect elements of the TMDL analyses and, where available, implementation plans. This could include incorporating information provided in the TMDL directly into the permit. General permits apply to a broad category of sources in a geographic area. In most cases, general permits are statewide, but in some cases, permit writers can develop and issue general permits on a watershed-scale. While general permits provide permit writers with a degree of permitting efficiency, this type of permit may not provide the same opportunities for tailoring requirements and adding a level of specificity. To implement TMDLs through statewide general stormwater permits, permit writers can use broad requirements that direct sources to identify applicable TMDLs and modify their SWMPs or SWPPPs accordingly. Implementing TMDLs through watershed-scale general permits can provide permit writers with more flexibility to incorporate specific elements, such as BMP performance standards, that broadly apply to a group of sources. Permit writers could also add specificity into general permits to promote TMDL implementation, such as developing technical appendices that include TMDL-specific elements applicable to stormwater sources.

Categories of permits elements discussed in this section include determining applicability, water quality controls, and monitoring. These categories apply to both individual and general permits, although the approaches used in each category will vary depending on the type of permit. Each category contains a description of options based on real-world examples, and are available in the Appendix.

6.1.1. Requirements Related to Determining Applicability

Stormwater permits often require permittees to first determine if an existing TMDL is applicable to its discharge. The key questions for making this determination are:

1. Is there a discharge to an impaired waterbody with an approved TMDL?
2. Does the discharge include the pollutant of concern addressed in the approved TMDL?

One option for determining applicability requirements could be for a state that the source should make a determination on the basis of the knowledge of their location and discharges, and provide infomration on how to determine if a discharge goes to an impaired waterbody, such as a link to a Web site that provides lists of impaired waterbodies. Another option could be to provide more detailed information to sources to help them determine if they contribute to one or more impairments, where to go for more information on a specific TMDL, or to even include the applicable TMDL data and information in an appendix to the permit.

Applicability can go beyond whether the source is discharging to an impaired waterbody to determine if the discharge contributes to the impairment(s). A source might have a discharge to an impaired waterbody, but if the discharge does not contribute to the impairment(s) (e.g., does not contain the pollutant of concern) the additional controls related to the impaired waterbody might not apply. If permit writers want to use pollutant-specific considerations as a factor in determining applicability, there are various options to consider. One option could be for permit writers to limit permit coverage for sources that discharge to impaired waterbodies with impairments caused by pollutants commonly associated with that source. For example, permit writers could state that industrial facilities are not eligible for coverage under an industrial general permit if the facility discharges to an impaired waterbody with an approved TMDL for metals. Another option for permit writers could be to require sources to conduct discharge monitoring for a pollutant of concern or flow monitoring (or both) over a specified period of time to determine applicability. If the source can demonstrate that the discharge does not contribute to the impairment(s), the permit could then exempt the source from some or all additional TMDL implementation requirements.

In Practice: Requiring Sources to Determine Applicability in Tennessee

Tennessee's Phase II MS4 General Permit simply states that a permitted stormwater source must determine if any discharges go to an impaired waterbody. The permit states the following:

> Determine whether stormwater discharge from any part of the MS4 significantly contributes directly or indirectly to a 303(d) listed (i.e., impaired) waterbody. Water quality impaired waters means any segment of surface waters that has been identified by the division as failing to support classified uses.... If you have 303(d) discharges described above, you must also determine whether a Total Maximum Daily Load (TMDL) has been developed by the division and approved by EPA for the listed waterbody.

In Practice: Providing Applicable TMDL Requirements as a Permit Appendix in Washington

The state of Washington's final Phase II MS4 general permits for regulated small MS4s in eastern and western portions of the state compile the information permitted stormwater sources need to determine TMDL requirement applicability. Each permit contains a separate appendix that lists all the applicable TMDLs, the specific requirements, and a list of the potential permittees to which each of the TMDLs applies.

In Practice: Using Geographic Location to Determine Applicability for Georgia's Industrial General Permit

Georgia's Industrial General Permit contains applicability requirements that are based on a permitted stormwater source's geographic location, relative to an impaired stream segment. Permit language follows:

Any operator who intends to obtain coverage under this permit for storm water discharges associated with industrial activity into an Impaired Stream Segment, or within one (1) linear mile upstream of and within the same watershed as, any portion of an Impaired Stream Segment, identified as partially supporting or not supporting designated uses on Georgia's most current 303(d) list, must satisfy the requirements of Part III.C of this permit if the pollutant(s) of concern for which the Impaired Stream Segment has been listed may be exposed to storm water as a result of current or previous industrial activity at the facility. Those discharges that are within one (1) linear mile of an Impaired Stream Segment, but are not within the watershed of any portion of that stream segment are excluded from this requirement.

Georgia's 303(d) list is at www.gaepd.org.

In Practice: Identifying Pollutants of Concern in Permit Eligibility Requirements

Minnesota's CGP lays out what are the pollutants of concern for construction sites that discharge to impaired waterbodies. Construction site operators that want coverage under Minnesota's CGP must implement the applicable BMPs listed in the permit and any other specific implementation measures specified in the approved TMDL to which they are subject. The draft Minnesota CGP states the following:

> Discharges to waters identified as impaired pursuant to section 303 (d) of the federal Clean Water Act (33 U.S.C. § 303(d)) where the identified pollutant(s) or stressor(s) are phosphorus (nutrient eutrophication biological indicators), turbidity, dissolved oxygen, or biotic impairment (fish bioassessment, aquatic plant bioassessment and aquatic macroinvertebrate bioassessment), and with or without a U.S. Environmental Protection Agency (USEPA) approved Total Maximum Daily Load (TMDL) for any of these identified pollutant(s) or stressor(s)" must meet the applicable requirements of Part III.A.9, which include specific BMPs to limit these stressors.

6.1.2. Requirements Related to Identifying and Implementing Water Quality Controls

After EPA has approved a TMDL, permit writers must develop effluent limitations and permit conditions that are consistent with the assumptions and requirements of the approved WLA. In the context of stormwater permits, effluent limitations are most often expressed as BMPs, but permit writers can also use numeric limits (e.g., loads, concentrations, or performance standards). Effective TMDL implementation often relies on selecting the right mix of control measures to achieve progress toward addressing the WLA. Chapter 5 of this Handbook focuses on the technical resources and approaches for evaluating and selecting BMPs to implement the WLA.

Permit writers, in conjunction with information provided by TMDL writers, can consider a variety of approaches that involve either recommending BMPs or relying on sources to do the evaluation and selection on their own. Approaches for permit writers to consider are described below.

- **Requiring implementation of specific BMPs in the permit.** Under this option, permit writers could develop a proposed list of BMPs that a source could implement to reduce pollutant loadings to

implement the WLA. Permit writers could consider this approach when stormwater planners have conducted an internal analysis of possible BMPs. Given the resource-intensive nature of this option, this approach might be suitable for geographic areas that need certain types of BMPs (e.g., developing areas versus built-out areas of an MS4), or discreet sources (e.g., the only MS4 or construction site discharging to the impaired waterbody).

- **Providing a recommended menu of potential BMPs in the TMDL, implementation plan, or the permit for sources to evaluate and select.** This option is similar to the option described above in that TMDL and permit writers could develop a recommended list of BMPs. The difference between these options, however, is that this BMP list serves more as a menu of potential BMPs. Under this option, permit writers could provide some technical information related to each BMP to help sources evaluate and select appropriate BMPs. Sources would need to conduct a thorough analysis to select the appropriate suite of BMPs from the list to achieve progress toward implementing the WLA.
- **Referencing BMP performance standards in the TMDL, implementation plan, or the permit.** Under this option, TMDL and permit writers could recommend or reference performance standards for specific pollutants and allow sources to determine which BMPs will best meet the performance standard. One example might be a construction site must achieve a specific percent reduction in TSS, giving the source flexibility in the types of BMPs used to meet the standard. The TMDL and permit writer could provide recommendations on how sources could demonstrate that the selected BMPs can meet the required performance standards (e.g., using a combination of modeling and monitoring).
- **Recommending the selection of BMPs and developing benchmark values or performance measures.** This option has similarities to the option described above in that it focuses on the use of performance standards. However, under this option, permit writers could develop permit requirements that give sources the responsibility for developing the performance standards, often referred to in this context as benchmark values or performance measures. Permit requirements can focus on selecting BMPs to achieve progress toward implementing the WLA and developing performance measures that indicate the expected level of BMP performance. Beyond BMP performance, requirements can focus on developing quantifiable benchmarks that track the overall success of SWMPs and SWPPPs in reducing pollutant loads. If permit writers choose this option, it is important to note that sources might have concerns about compliance implications associated with benchmark values and performance measures. As a result, permit writers might want to consider developing permit language that specifies the intended use of performance measures and benchmark values—not as numeric effluent limits but as guideline values to facilitate adaptive management.
- **Requiring the review of existing BMPs and selecting additional BMPs to achieve progress toward addressing the WLA.** Under this option, permit writers could require sources to conduct an analysis of existing BMPs to determine the need for additional pollutant load reductions through improved BMP implementation or additional BMPs. Sources receive little technical guidance through the requirements, allowing them flexibility in conducting the analysis and justifying the selection of specific BMPs. Permit writers could consider including in the requirements a list of supporting documentation (e.g., calculations, assumptions, studies) that would provide the rationale for the proposed strategy to achieve progress toward addressing the WLA. This option is particularly effective when the the TMDL writer develops a WLA that permit writers can use as the basis for developing a performance standard. This approach provides permittees with flexibility in finding the optimal combination of existing and new BMPs to implement the WLA.

- **Consider numeric effluent limitations.** Permit writers might determine that BMPs are not an appropriate way to express effluent limitations and might choose to develop numeric effluent limitations as a feasible and appropriate way to incorporate the TMDL provisions into the permit.

There are no guidelines for determining which approach is most appropriate to use. It is likely that a variety of factors, including type of source, type of permit, and availability of resources, will influence which approach makes the most sense.

In Practice: Options for Water Quality Control Requirements

Existing stormwater permits use different types of requirements to ensure SWMPs and SWPPPs integrate effective BMPs for addressing stormwater source WLAs under approved TMDLs and, in some cases, impaired waterbodies without approved TMDLs. Provided below are examples of differing SWMP and SWPPP requirements for developing and implementing BMPs to addressWLAs under various types of stormwater permits.

Broad Requirements for Permitted Stormwater Sources to Develop SWMPs and SWPPPs to Address Impairments and Stormwater Source WLAs

Tennessee Phase II MS4 General Permit
The general permit developed for use by regulated small MS4s in Tennessee contains a broad set of requirements for developing and implementing SWMPs. The requirements focus on evaluating whether the implementation of existing stormwater control measures is meeting the TMDL provisions, or if additional control measures are necessary. Permittees must document all control measures being implemented or planned to be implemented and provide a schedule of implementation for all planned controls. To demonstrate that control measures will meet TMDL requirements and assumptions, permittees must also provide associated calculations, assessments, reports, and other evidence that provided the rationale for selecting specific control measures.

Wisconsin Phase II MS4 General Permit
Under Wisconsin's Phase II MS4 general permit, permittees that discharge to an impaired waterbody must take steps to develop and implement an SWMP to reduce—and potentially eliminate—the pollutant of concern contributing to a waterbody impairment. Because the permit is a general permit and the requirements could apply to a wide range of pollutants, the permit uses broadly defined requirements to ensure permittees discharging to impaired waterbodies develop and implement SWMPs that will reduce the pollutant of concern. Specifically, the general permit language requires permittees to, "include a written section in its storm water management program that discusses the management practices and control measures it will implement as part of its program to reduce, with the goal of eliminating, the discharge of pollutant(s) of concern that contribute to the impairment of the waterbody. This section of the permittee's program shall specifically identify control measures and practices that will collectively be used to try to eliminate the MS4's discharge of pollutant(s) of concern that contribute to the impairment of the waterbody and explain why these control measures and practices were chosen as opposed to other alternatives."

Watershed-specific BMP and Performance Standard Requirements

Big Darby Creek Watershed (Ohio) Construction General Permit
To implement the Big Darby Creek Watershed TMDL, Ohio EPA developed and issued the Big Darby Creek Watershed CGP. The overall permit is intended to implement the pollutant load reduction targets established under the TMDL; therefore, the permit states that the "general permit requires control measures/BMPs for construction sites that reflect recommendations set forth in the U.S. EPA approved Big Darby Creek TMDL." The water quality control measures specified under the SWPPP requirements include a combination of management practices, effluent targets, and infiltration requirements necessary to support stream base flows and stream setbacks necessary to protect the stream channel. The permit also states that "the erosion, sediment, and stormwater management practices used to satisfy the conditions of this permit, should meet the standards and specifications in the most current edition of Ohio's Rainwater and Land Development manual or other standards acceptable to Ohio EPA unless otherwise specified as a condition of this permit."

Specific BMP Requirements for SWMPs and SWPPPs to Address Impaired Waterbodies and Implement Stormwater Source WLAs

Oregon Construction General Permit (1200-C)
If a permitted construction site has the potential to discharge sediment or turbid water to a waterbody with an approved TMDL for sedimentation or turbidity, or is listed on the state's 303(d) for impairment due to sedimentation or turbidity, Oregon's CGP requires the permittee to implement one of two sets of options. Under Option 2, the CGP requires permittees to implement one or more of six BMPs identified to control and treat sedimentation and turbidity, in addition to implementing the standard set of BMPs required of all erosion and sediment control plans (ESCP). The BMPs identified in the permit are as follows:

- Compost berms, compost blankets, or compost socks;
- Erosion control mats (rolled or blown);
- Tackifiers used in combination with perimeter sediment control BMPs;
- Established vegetated buffers sized at 50 feet plus 25 feet per 5 degrees of slope;
- Water treatment by electro-coagulation, chemical flocculation, or filtration; or
- Other substantially equivalent sediment or turbidity BMP approved by the department.

Permittees selecting Option 2 must indicate in the ESCP which of the six supplemental BMPs have been selected to address discharges to waterbodies impaired for sedimentation and turbidity.

Georgia Industrial Stormwater Permit (GAR000000)
Georgia's industrial stormwater permit contains requirements related to discharges into, or within 1 linear mile upstream of and within the same watershed as, any portion of an Impaired Stream Segment impaired for fecal coliform, as well as substances other than fecal coliform. Under the requirements for facilities discharging fecal coliform, the permit references an appendix that contains a list of BMPs specifically for animal processing plants that might be potential sources of fecal coliform. Permittees that do not meet the TSS benchmark value (used as a surrogate indicator for fecal coliform under this permit) in the first 12-month sampling period have one year to select, design, and implement supplemental BMPs from the list of BMPs provided in the appendix, or other appropriate BMPs.

Quantifiable Performance Targets to Determine the Need for Additional BMPs

City of Portland, Multnomah County, and Port of Portland (Oregon) Phase I MS4 Individual Permit No. 101314
Portland and its co-permittees are subject to an individual Phase I MS4 permit that contains a variety of requirements for developing and implementing an effective SWMP to address approved WLAs for the permitted MS4s. Permit conditions do not include recommended or required BMPs; instead, the permit requires co-permittees to select BMPs to implement the approved WLAs and develop quantifiable performance measures for assessing BMP effectiveness. Performance measures are pollutant load reduction estimates to facilitate an adaptive management approach to SWMP implementation—the quantifiable performance measures for BMPs are not numeric effluent limitations.

Washington Construction General Permit
The Washington Department of Ecology issued a CGP that contains requirements for three categories of permitted construction sites: (1) less than 1 acre; (2) between 1 and 5 acres; and (3) greater than 5 acres. Under this permit, permittees that discharge turbidity, fine sediment, high pH, or phosphorus to impaired waterbodies listed for one of these parameters is required to conduct regular sampling. If discharge sampling indicates that the permittee's discharge exceeds the water quality standard for turbidity, all future discharges are subject to a numeric effluent limitation equal to the water quality standard for turbidity. Exceedances of the numeric effluent limitation then triggers requirements for evaluating and modifying the SWPPP to include BMPs that will allow the permittee to meet the numeric effluent limitation for turbidity.

Numeric Effluent Limitations

Draft Ventura County Phase I MS4 Individual Permit No. CAS004002
The draft version (dated 08/28/07) of the Ventura County Phase I MS4 Individual permit addresses requirements under multiple TMDLs for multiple watersheds for a variety of pollutants of concern, including nitrogen compounds, bacteria, sediments, and toxicity. Rather than express effluent limitations in the form of BMPs, this version of the Ventura County Phase I MS4 individual permit addresses the TMDL WLAs as numeric WQBELs for dry weather and wet weather.

6.1.3. Monitoring Requirements

As discussed in Chapter 5, monitoring and assessment are essential to help sources to make progress toward implementing WLAs. Information generated through monitoring and assessment activities are also key to promoting adaptive management and continuous improvement in implementation activities. In addition, monitoring and assessment activities are key to quantifying pollutant load reductions achieved through SWMP and SWPPP implementation—first to establish a baseline of pollutant load reductions expected or achieved through BMPs implemented under existing SWMPs and SWPPPs and then to determine pollutant load reductions from any additional BMPs deemed necessary to address WLAs. Requirements related to quantifying pollutant load reductions focus on developing and implementing monitoring plans.

Many SWMP and SWPPP requirements related to meeting stormwater source WLAs include some type of monitoring requirements to gauge BMP effectiveness, overall SWMP and SWPPP effectiveness, and to facilitate adaptive management activities. Options for monitoring requirements include BMP performance monitoring, stormwater discharge outfall monitoring, and ambient in-stream water quality monitoring. Per EPA's 2002 memorandum, where stormwater permits contain effluent limitations expressed as BMPs, these permits should specify the monitoring necessary to determine if BMPs are achieving the expected pollutant load reductions. Therefore, stormwater permits that implement TMDLs often contain monitoring requirements that focus on BMP performance, such as benchmark monitoring to determine progress toward a pollutant reduction goal, and support adaptive management activities related to modifying SWMPs and SWPPPs to improve overall effectiveness. Where stormwater permits do contain numeric effluent limitations, monitoring requirements are likely to focus on determining compliance with applicable numeric effluent limitations.

It is important to note that many existing permits do not specifically require monitoring; however, monitoring might be warranted for these permits to assess TMDL implementation. Chapter 5 of this Handbook discusses monitoring and assessment issues and provides resources that can aid in the development of monitoring and assessment requirements.

In Practice: Options for Monitoring Requirements

General Monitoring Plan Development

Tennessee Phase II MS4 General Permit
Under the general permit, regulated small MS4s must describe a method for evaluating whether stormwater controls are adequate for meeting the requirements of the TMDL.

Performance and Benchmark Monitoring

City of Portland, Multnomah County, and Port of Portland (Oregon) Phase I MS4 Individual Permit No. 101314
To gauge the effectiveness of the SWMP in reducing TMDL pollutant loads to the MEP, the Portland and its co-permittees must include a specific strategy for implementing monitoring in the SWMP. Under this permit, co-permittees measure effectiveness according to the quantifiable performance measures and benchmarks that the permit requires them to establish to support SWMP adaptive management. According to the permit, performance measures are estimates of the effectiveness of BMPs expressed as pollutant load reduction estimates and benchmarks are total pollutant load reduction estimates for each parameter or surrogate, where applicable, for which a WLA is established at the time of permit issuance. Neither performance measures nor benchmarks are numeric effluent limits, but rather tools for guiding adaptive management activities.

Oregon Construction General Permit (1200-C)

If a permitted construction site has the potential to discharge sediment or turbid water to a waterbody with an approved TMDL for sedimentation or turbidity, or is listed on the state's 303(d) for impairment due to sedimentation or turbidity, Oregon's CGP requires the permittee to implement one of two sets of options. Under Option 1, the permittee must conduct stormwater monitoring to determine if discharges meet or exceed a benchmark value for turbidity (i.e., 160 NTUs) that indicates the effectiveness of BMPs. If any samples exceed the benchmark value, the permittee must evaluate existing BMPs and take corrective action. If stormwater discharge samples continue to exceed the benchmark value, the permittee must implement Option 2 (see description of Option 2 under the In Practice discussion related to water quality controls above) and submit an Action Plan that identifies additional BMPs to be implemented and the rationale for selecting the identified BMPs.

Washington Construction General Permit
Permittees covered under Washington's CGP must conduct turbidity sampling to determine compliance with the water quality standard for turbidity. The permit requires permittees to measure background turbidity in the 303(d)-listed receiving water immediately upstream (upgradient) or outside the area of influence of the discharge. For monitoring discharge turbidity, the permit requires permittees to measure at the point of discharge into the 303(d) listed receiving waterbody, inside the area of influence of the discharge or at the point where the discharge leaves the construction site, rather than in the receiving waterbody. Although the permit states that monitoring is used to determine compliance with the turbidity water quality standard, it appears that it functions more as a performance benchmark. If discharge turbidity exceeds the water quality standard for turbidity, all future discharges must comply with a numeric effluent limitation (equal to the water quality standard for turbidity). Future discharges exceeding the numeric effluent limitation triggers SWPPP modification requirements.

Compliance Monitoring

Draft Ventura County Phase I MS4 Individual Permit No. CAS004002
Compliance with the dry-weather and wet-weather numeric WQBELs under the draft version of the Ventura County Phase I MS4 Individual permit is determined through end-of-pipe monitoring at major outfalls. The draft version of the permit requires co-permittees to develop a wet-weather and dry-weather monitoring workplan for review and approval by the Regional Water Board.

6.1.4. Compliance Considerations

[This section still under internal review – do not quote or cite]

When developing permit requirements, permit writers will likely face issues and questions related to determining compliance. One key issue relates to establishing an appropriate compliance schedule for sources to implement a WLA (e.g., within a 5-year permit term or beyond). Permit writers can consider using interim limits or a phased implementation approach. Interim limits are a way for permit writers to schedule incremental progress toward implementing the WLA over time. One option is for the TMDL to reference, or for the permit to specify, the interim limits by providing a schedule with the required interim numeric targets in a specific timeframe. Another option to consider relates to the benchmarking approach (discussed earlier in this chapter) in which a source determines how much progress is feasible, over a specified time frame, to implement the WLA. The source could then submit the proposed benchmarks and associated schedule to the permit writer for review and approval.

Resources: The Appendix of this Handbook contains the actual stormwater permit language referenced in this section, as well as relevant requirements from other stormwater permits, for TMDL and permit writers to review and consider when discussing and developing requirements to implement TMDLs.

In Practice: Incorporating Interim TMDL Numeric Targets into Permits in San Diego, California

The San Diego Phase I MS4 permit (Order No. R9-2007-0001/NPDES No. CAS0108758) contains requirements to implement the Chollas Creek Diazinon TMDL. The permit includes a table that presents the WLA, interim TMDL numeric target, and percent reduction required over the permit duration. Permit language reads as follows:

a. The Copermittees in the Chollas Creek watershed shall implement BMPs capable of achieving the interim and final diazinon Waste Load Allocation (WLA) concentration in the storm water discharge in Chollas Creek listed in Table 5.

b. The Copermittees in the Chollas Creek watershed shall not cause or contribute to the violation of the Interim TMDL Numeric Targets in Chollas Creek as listed in Table 5. If the Interim TMDL Numeric Target is violated in Chollas Creek in more than one sample in any three consecutive years, the Copermittees shall submit a report that either 1) documents compliance with the WLA through additional sampling of the urban runoff discharge or 2) demonstrates, using modeling or other technical or scientific basis, the effectiveness of additional BMPs that will be implemented to achieve the WLA. The report may be incorporated into the Watershed Urban Runoff Management Program Annual Report unless the Regional Board directs an earlier submittal. The report shall include an implementation schedule.

6.2. Options for Connecting Programmatic Documents

TMDL and permit writers can not only work together to consider the appropriate types of conditions that could be developed to implement stormwater source TMDLs, but also can collaborate to decide how the associated programmatic documents, such as the TMDL report and the stormwater permit, can help articulate this information. The goal is to help ensure that no matter what document a permitted stormwater source refers to—the TMDL or the stormwater permit—each document has a clear and consistent connection to the information contained in the other. This section discusses options for TMDL and permit writers to consider when deciding how to develop a connection between the TMDL report and stormwater permits, as well as other related programmatic documents including implementation plans.

Within the TMDL report and stormwater permit, TMDL and permit writers have several possible options for developing a connection between the information contained in the document. In the TMDL report, the TMDL writer might develop a connection to the permit through the WLA or the implementation plan (if included as part of the TMDL report) or other components that could be included in the TMDL report or implementation plan (e.g. optional monitoring section). In stormwater permits, the connection to TMDLs can also vary. Permit requirements might appear as a comprehensive set of detailed special conditions related to stormwater discharges to impaired waterbodies with approved TMDLs (or listed waterbodies without an approved TMDL), or the requirements ccould appear throughout the permit under existing permit conditions related to SWMP and SWPPPs, monitoring, reporting, and other categories of requirements.

TMDL and permit writers can work together to develop the most appropriate section of each programmatic document to place stormwater-source-TMDL-related information. From there, TMDL and permit writers can decide the best approach for developing the connection, such as referencing elements contained in one programmatic document or directly including and referenceing them in each. A brief discussion these approaches related to each type of programmatic document and its associated components is provided below.

6.2.1. Using the WLA to Connect to Permits

Per EPA's 2002 memorandum, regulations state that when a TMDL has been approved, NPDES permits should contain effluent limits and conditions consistent with the requirements and the assumptions of the WLA. One option is to describe and reference all relevant permit requirements for implementing the WLA within the the TMDL report. Under this approach, stormwater permits could state that sources should comply with the numeric WLA and the associated elements included in the TMDL document. This approach basically incorporates the WLA and associated implementation information into the permit by reference. It is important to note, that although this type of approach could facilitate connections between WLAs and general permits, it may result in permits that are more challenging to tailor with specific permit requirements.

Another option is to have stormwater permits directly incorporate the TMDL WLA information so that each programmatic document contains the same element using identical language, as opposed to just referencing the other document as is suggested above. While this more specific approach could be easier to apply when using individual or watershed-based stormwater permits, permit writers could also use this type of approach with general permits in conjunction with a regularly updated TMDL appendix that contains specific information for permittees.

In Practice: Referencing and Integrating TMDL Provisions in Permits in Washington

The Western Washington Phase II MS4 General Permit contains broad language to convey the requirements related to MS4s addressed by an approved TMDL. The body of the permit requires MS4s to comply with the specific actions described in applicable TMDLs. To aid permittees, the Washington Department of Ecology compiled all relevant, existing implementation actions from applicable TMDLs into a comprehensive appendix to the permit. By referencing the appendix in the permit, permit writers were able to ensure that the compilation of TMDL-specific activities would become enforceable permit requirements. The general permit language states the following:

> The following requirements apply if an applicable Total Maximum Daily Load (TMDL) is approved for stormwater discharges from MS4s owned or operated by the Permittee. Applicable TMDLs are TMDLs which have been approved by EPA on or before the date permit coverage is granted. All Permittees shall be in compliance with the requirements of applicable TMDLs.
>
> A. For applicable TMDLs listed in Appendix 2, affected permittees shall comply with the specific requirements identified in Appendix 2. Each Permittee shall keep records of all actions required by this Permit that are relevant to applicable TMDLs within their jurisdiction. The status of the TMDL implementation shall be included as part of the annual report submitted to Ecology.
>
> Where monitoring is required in Appendix 2, the Permittee shall conduct the monitoring according to a Quality Assurance Project Plan (QAPP) approved by Ecology.
>
> B. For applicable TMDLs not listed in Appendix 2, compliance with this Permit shall constitute compliance with those TMDLs.
>
> C. For TMDLs that are approved by EPA after this Permit is issued, Ecology may establish TMDL related permit requirements through future permit modification if Ecology determines implementation of actions, monitoring or reporting necessary to demonstrate reasonable further progress toward achieving TMDL waste load allocations, and other targets, are not occurring and shall be implemented during the term of this Permit or when this Permit is reissued. Permittees are encouraged to participate in development of TMDLs within their jurisdiction and to begin implementation.

6.2.2. Using Implementation Plans to Connect to WLAs and Permits

While implementation plans are not a required component of a TMDL, many states do develop and include some form of an implementation plan in their TMDL document either to satisfy state regulatory requirements or to facilitiate TMDL implementation. If TMDL and permit writers intend to engage in implementation planning activities and develop an implementation plan for stormwater source TMDLs, there are a few ways to consider developing a stronger connection between WLAs and permits through the use of implementation plans. One option for using implementation plans to connect stormwater source WLAs with stormwater permits is to have the implementation plan serve as the primary vehicle for referencing and conveying information relating to implementation of the stormwater source WLAs (e.g., supplemental BMPs, SWMP and SWPPP assessment and modification, monitoring plan development and implementation, adaptive management measures). The TMDL could include these elements by reference and the associated stormwater permits could then incorporate the implementation plan information by reference.

In Practice: Using Implementation Plans to Connect WLAs and Stormwater Permits

Implementation plans with recommendations to guide stormwater permit requirements:

Swamp Creek Fecal Coliform Bacteria TMDL (Washington) Water Quality Improvement Report and Implementation Plan
The Water Quality Improvement Report and Implementation Plan includes recommendations for each MS4 as well as "anticipated actions" or requirements that the permitting authority intends to include in associated NPDES permits (Appendix D). The recommendations are those measures and practices that are intended to reduce bacterial pollution to Swamp Creek.

Big Darby Creek (Ohio) Watershed TMDLs
The implementation portion of the TMDL develops a tiered approach to monitoring progress and validating the TMDL:

1. Confirmation of completion of implementation plan activities
2. Evaluation of attainment of chemical water quality criteria
3. Evaluation of biological attainment.

A TMDL revision will be triggered if any one of the validation steps is not being completed or if the water quality standards are not being attained after an appropriate time interval. Once the majority of or the major implementation plan items have been carried out or the water quality monitoring shows consistent and stable improvements then a watershed assessment would be completed to evaluate attainment of the use designations. If water quality monitoring does not show improvement or waterbodies are still not attaining water quality standards after the implementation plan has been carried out, a TMDL revision would be initiated.

Implementation plans with specific BMPs using adaptive management and phased implementation:

Chloride TMDL Report: Shingle Creek, Minnesota
The implementation portion of the TMDL report calls for the use of adaptive management principles. According to the report, adaptive management is appropriate because it is difficult to predict the chloride reduction that will occur from implementing strategies with limited amount of data available to predict expected reductions. The report requires continued monitoring and *course corrections* based on monitoring results.

Another possible option is for the stormwater permit, not the implementation plan, to include all additional requirements developed to implement the stormwater source WLAs. Under this approach, the implementation plan serves as a mechanism to link the TMDL and the stormwater permit without providing a significant amount of detail in the TMDL. This approach could be ideal for situations in which TMDL writers do not have the time or resources to engage in detailed implementation planning.

Resources: The Appendix of this Handbook contains excerpts of TMDLs, implementation plans, and stormwater permit requirements from the real-world examples provided in this section, as well as other TMDLs and stormwater permits that illustrate how states connect permitted stormwater source requirements among programmatic documents.

6.3. Other Information to Consider

Permit writers, watershed organizations, or municipalities could encounter situations where previously developed TMDLs and implementation plans are more difficult to implement in permits, including the following situations.

6.3.1. No separate WLA for NDPES Stormwater source

Permit writers might be working with older TMDLs that were approved prior to EPA's guidance, *Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs* (Wayland, R.H., and J.A. Hanlon, 2002), or that include allocations for stormwater discharges that were considered to be nopoint sources at the time the TMDL was approved, but that currently are subject to NPDES permitting. For example, an older TMDL could group both urban nonpoint source and point source runoff into one overall category under an aggregated load allocation, or the older TMDL could include runoff from MS4's under the load allocation that are now covered under the Phase II NDPES requirments. Because permit effluent limits have to meet water quality standards under 122.44(d)(1)(vii)(A), the permit writer will need to account for the current regulated stormwater discharges identified in the TMDL regarldless of how they were labeled in the older TMDL document, and should explain how they are being accounted for in the permit. The permit writer might be able to get additional information from TMDL writers to help implement these wasteload allocations into permits.

6.3.2. Impaired Waterbody with No Approved TMDL

Another scenario that TMDL and permit writers might encounter is an impaired waterbody that does not yet have an approved TMDL. Clearly, it is important to ensure that stormwater discharges do not further cause or contribute to exceedances of water quality standards. However, without a specific WLA, TMDL and permit writers might have questions about the appropriate implementation activities to recommend or, in the case of a permit, require until a TMDL is developed and approved. To provide some level of control on pollutants of concern associated with the impairment, TMDL and permit writers could work together to identify interim early action BMPs or performance standards that sources could implement until an approved TMDL becomes available. In such cases, it might be valuable to identify monitoring programs to evaluate contributions from stormwater sources to the impairment for use in future TMDL development.

In Practice: Addressing Impaired Waterbodies with No Approved TMDL in Permits in Wisconsin

The Wisconsin Phase II MS4 General Permit contains requirements that address MS4 discharges to impaired waterbodies with no approved TMDL. The permit requires permittees to address the pollutant of concern contributing to the impairment in the SWMP and limits permittees' ability to have a new or increased discharge of a pollutant of concern unless there is an approved TMDL. The general permit language states the following:

> 1.5.2 If the permittee's MS4 discharges to an impaired waterbody, the permittee shall include a written section in its storm water management program that discusses the management practices and control measures it will implement as part of its program to reduce, with the goal of eliminating, the discharge of pollutant(s) of concern that contribute to the impairment of the water body. This section of the permittee's program shall specifically identify control measures and practices that will collectively be used to try to eliminate the MS4's discharge of pollutant(s) of concern that contribute to the impairment of the waterbody and explain why these control measures and practices were chosen as opposed to other alternatives. Pollutant(s) of concern means a pollutant that is causing impairment of a waterbody.
>
> 1.5.3 After the permittee's start date of coverage under this permit, the permittee may not establish a new MS4 discharge of a pollutant of concern to an impaired waterbody or increase the discharge of a pollutant of concern to an impaired waterbody unless the new or increased discharge causes the receiving water to meet applicable water quality standards, or the Department has approved a total maximum daily load (TMDL) for the impaired waterbody.

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Appendix: TMDL and NPDES Stormwater Permit Language Excerpts

California

Los Angeles County MS4 NPDES Permit

10. On May 18, 2000, the USEPA established numeric criteria for priority toxic pollutants for the State of California (California Toxics Rule (CTR)) 65 Fed. Reg. *31682 (40 CFR 131.38), for the protection of human health and aquatic life. These apply as ambient water quality criteria for inland surface waters, enclosed bays, and estuaries. The State Board adopted the* Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP) – 2000, *on March 2, 2000, for implementation of the CTR (State Board Resolution No. 2000-15 as amended by Board Resolution No. 2000-030). This policy requires that discharges comply with TMDL-derived load allocations as soon as possible but no later than 20 years from the effective date of the policy.*

28. The Regional Board adopted the Santa Monica Bay Beaches Dry Weather TMDL for Bacteria (hereinafter "Dry Weather Bacteria TMDL") on January 24, 2002. The TMDL was subsequently approved by the State Board, the Office of Administrative Law (OAL), and the USEPA and became effective on July 15, 2003.

29. The Waste Load Allocations (WLAs) in the Dry Weather Bacteria TMDL are expressed as the number of allowable days that the Santa Monica Bay beaches may exceed the Basin Plan water quality objectives for protection of Water Contact Recreation (REC-1) in marine waters, specifically the water quality objectives for bacteria. Appropriate modifications to this order are therefore included in Parts 1 (Discharge Prohibitions) and 2 (Receiving Water Limitations), pursuant to 40 CFR 122.41(f) and 122.62, and Part 6.I.1 of this Order. Additionally, 40 CFR 122.44(d)(1)(vii)(B) requires that NPDES permits be consistent with the assumptions and requirements of any available waste load allocation. Tables 7-4.1, 7-4.2a, and 7-4.3 of the Basin Plan set forth the pertinent provisions of the Dry Weather Bacteria TMDL. They require that during Summer Dry Weather there shall be no exceedances in the Wave Wash of the single sample or the geometric mean bacteria objectives set to protect the Water Contact Recreation (REC-1) beneficial use in marine waters. Accordingly, a prohibition is included in this Order barring discharges from a MS4 to Santa Monica Bay that result in exceedance of these objectives. Since the TMDL and the WLAs contained therein are expressed as receiving water conditions, Receiving Water Limitations have been included in this Order that are consistent with and implement the zero exceedance day WLAs.

30. Pursuant to federal regulations at 40 CFR 124.8, and 125.56, a Fact Sheet was prepared to provide the basis for incorporating the Dry Weather Bacteria TMDL into this Order. The Fact Sheet is hereby incorporated by reference into these findings.

31. The iterative approach to regulating municipal stormwater is not an appropriate means of implementing the Santa Monica Bay beaches Summer Dry Weather WLAs for any and all of the following reasons: (a) The WLAs do not regulate the discharge of stormwater; (b) The harm to

the public from violating the WLAs is dramatic both in terms of health impacts to exposed beachgoers, and the economic cost to the region associated with related illnesses; (c) Despite the fact that more than a decade and a half has passed since MS4 permittees were required to eliminate illicit connections/discharges (IC/ID) into their MS4s, their programs have not eliminated standards violations at the beaches; and (d) Few permittees have ever documented revisions to their SQMP to address chronic exceedances of water quality standards.

Georgia

Phase II MS4 General Permit

D. Stormwater Management Modifications

1. The SWMP may be modified by the permittee at any time. Written notification of substantial SWMP modifications must be submitted 30 days prior to implementation of the SWMP modification.

2. EPD may require the permittee to modify the SWMP as needed to:

a. Include more stringent requirements as necessary to comply with new State or Federal statutory or regulatory requirements;

b. Include other conditions deemed necessary by the Director to comply with the goals and requirements of the CWA and the State Act. The Director's request for modifications shall be made in writing and set forth a time schedule for the permittee to develop the modification(s), and offer the permittee the opportunity to propose alternative SWMP modifications to meet the objective of the requested modification.

General Permit for Stormwater Discharges Associated with Industrial Activity

C. Discharges Into, Or Within One Mile Upstream Of And Within The Same Watershed As, Any Portion Of An Impaired Stream Segment.

An operator is not eligible for coverage under this permit for discharges of stormwater associated with industrial activity to waters of the State for which a Total Maximum Daily Load (TMDL) is approved prior to or during the term of this permit, unless the facility develops, implements, and maintains a SWP3 that is consistent with the TMDL. The SWP3 must specifically address any conditions or requirements included in the TMDL that are applicable to the operator's discharge within the timeframe specified in the TMDL. If the TMDL establishes a specific numeric wasteload allocation that applies to an operator's discharge, or to stormwater discharges associated with industrial activity in general, then the operator must incorporate that allocation into the facility's SWP3 and implement all necessary measures to meet that allocation.

Any operator who intends to obtain coverage under this permit for stormwater discharges associated with industrial activity into an Impaired Stream Segment, or within one (1) linear mile upstream of and within the same watershed as, any portion of an Impaired Stream Segment, identified as "partially supporting" or "not supporting" designated uses on Georgia's most current 303(d) list, must satisfy the requirements of Part III.C of this permit if the pollutant(s) of concern for which the Impaired Stream Segment has been listed may be exposed to stormwater

as a result of current or previous industrial activity at the facility. Those discharges that are within one (1) linear mile of an Impaired Stream Segment, but are not located within the watershed of any portion of that stream segment are excluded from this requirement. Georgia's 303(d) list can be viewed on EPD's website at www.gaepd.org.

1. Discharges into, or within one (1) linear mile upstream of and within the same watershed as, any portion of an Impaired Stream Segment Impaired by substances other than fecal coliform.

a. Sampling schedule.

Regulated industrial facilities that are subject to the requirements in Part III.C.1. of this permit must conduct stormwater discharge sampling for the pollutant(s) of concern two times per quarter for a period of twelve (12) months. The pollutant(s) of concern for each impaired stream segment are identified on Georgia's 303(d) list. The sampling will only be required for those outfalls at the facility that have the potential to discharge the pollutant(s) of concern. The sampling must be conducted in accordance with Parts VI.A.3, 4, and 5 of this permit, except that composite samples may be collected in lieu of grab samples at the permittee's discretion. The Director may require composite or grab sampling where deemed appropriate in order to ensure that representative samples are collected.

Except as provided below, the sampling must begin no later than ninety (90) days after the later of the effective date of the permit or the date the facility becomes subject to the sampling requirements in Part III.C. However, if a facility with an existing stormwater discharge associated with industrial activity determines that additional time is needed to design and implement new or improved BMPs specifically for the pollutant(s) of concern, then that facility may delay commencement of the sampling program under this section of the permit for no more than twelve (12) months after the effective date of the permit in order to design and implement those BMPs. Facilities choosing this option must, no later than the date on which the Part III.C sampling would otherwise begin, provide a written notification, signed in accordance with Part VII.G of this permit, to EPD that they have elected to delay sampling and provide a schedule for BMP implementation. The Part III.C sampling program must begin immediately after the BMPs are required to have been implemented according to the schedule provided to EPD.

A summary of the sampling results must be submitted to EPD's Watershed Protection Branch with the Annual Report (see Appendix B of this permit). The report must also identify the applicable benchmark value(s) and state whether the facility has passed or failed the benchmark requirement for the twelve (12) month sampling period.

If a facility is unable to conduct one or both of the Part III.C sampling event(s) during a certain quarter due to adverse climatic conditions (i.e. no qualifying rainfall event occurs), then the facility shall include a written explanation for the absence of the sampling event in the next Annual Report submitted to EPD.

b. Applicable Benchmark Values.

The applicable benchmark values for discharges into, or within one (1) linear mile upstream of and within the same watershed as, any portion of an Impaired Stream Segment shall be the same numeric value as the Instream Water Quality Criterion for the pollutant(s) of concern as specified in Georgia's Rules and Regulations for Water Quality Control (Georgia Rule 39136.

03) unless otherwise established in Part III.C of this permit. The benchmark values are designed to assist permittees in determining if the BMPs established in a facility's SWP3 are effective in minimizing the concentration of the pollutant(s) of concern in stormwater discharge(s) from their facility. These benchmark values are intended to be guideline concentrations rather than numeric effluent limitations or permit conditions. The exceedance of a benchmark value established in Part III.C of this permit is not a permit violation and does not of itself indicate a violation of instream water quality standards. However, an exceedance of a benchmark value may be used in conjunction with other information to demonstrate a violation of this permit or a violation of water quality standards.

(1). Specific requirements for discharges into, or within one (1) linear mile upstream of and within the same watershed as, any portion of an Impaired Stream Segment impaired for DO (Dissolved Oxygen).

Facilities discharging into, or within one (1) linear mile upstream of and within the same watershed as, any portion of an Impaired Stream Segment for which the listing criterion is identified as DO (Dissolved Oxygen) will only be required to conduct sampling under Part III.C if industrial materials that may contribute Five Day Carbonaceous Biochemical Oxygen Demand (CBOD5) or ammonia (NH3) may be exposed to stormwater as a result of current or previous industrial activity at the facility. These facilities must sample for Five Day Carbonaceous Biochemical Oxygen Demand (CBOD5) and NH3. The applicable benchmark value for these discharges shall be an Ultimate Oxygen Demand (UOD) of 125 mg/l. The UOD shall be calculated as [(CBOD5 x 1.5) + (NH3 x 4.57)].

(2). Specific requirements for discharges into, or within one (1) linear mile upstream of and within the same watershed as, any portion of an Impaired Stream Segment impaired by nonpollutant specific criteria.

(i). Facilities discharging into, or within one (1) linear mile upstream of and within the same watershed as, any portion of an Impaired Stream Segment for which the listing criterion is identified as "Biota or Sediment" are required to conduct sampling for Total Suspended Solids (TSS) unless a TMDL has identified a different pollutant from nonpoint sources as causing the impairment, in which case sampling should be conducted for the pollutant(s) identified in the TMDL. The applicable TSS benchmark value for these discharges shall be 100 mg/l.

(ii). Facilities discharging into, or within one (1) linear mile upstream of and within the same watershed as, any portion of an Impaired Stream Segment for which the listing criterion is toxicity, FCG (fish consumption guidelines), SB (shellfishing ban), CFB (commercial fishing ban) or TWR (trophic weighted residue value of mercury in fish tissue)" will only be required to conduct sampling under Part III.C if a TMDL identifying a specific water quality parameter has been approved for the stream segment.

c. Evaluation of Part III.C sampling data

The Part III.C stormwater discharge sampling is intended to measure the effectiveness of the Best Management Practices (BMPs) implemented at those facilities. If benchmark values are exceeded using the pass/fail determination provided below, then improved or additional BMPs are required at the facility.

The sampling data for the twelve (12) month period must be evaluated using one of the following criteria. This shall constitute the pass/fail determination for evaluating BMP effectiveness:

(1). At least seventy-five (75) percent of the samples collected during the twelve (12) month period do not exceed the applicable benchmark value(s); or

(2). The average of the samples collected during the twelve (12) month period does not exceed the applicable benchmark value(s).

If a facility meets at least one of the above criteria then that facility has passed the benchmark requirement and may discontinue the Part III.C sampling but must thereafter properly maintain all of the BMPs that enabled the facility to meet the benchmark requirement.

If a facility does not meet at least one of the above criteria, then that facility has failed the benchmark requirement. Those facilities that do not pass the benchmark requirement for the first twelve (12) month sampling period may take up to one year to budget, select, design and construct/implement additional supplemental BMPs at the facility. Once the supplemental BMPs have been implemented, an additional twelve (12) month (two samples per quarter) period of sampling must be conducted as described in Part III.C.1.a above. Those facilities that pass the benchmark requirement, using the above pass/fail determination, after implementing supplemental BMPs may discontinue the Part III.C sampling but must thereafter properly maintain all of the BMPs that enabled the facility to meet the benchmark requirement.

Facilities that are not able to pass the benchmark requirement, using the above pass/fail determination, after implementing supplemental BMPs must continue the process of implementing additional supplemental BMPs at the facility and conducting a subsequent twelve month (two samples per quarter) period of sampling until the facility meets the benchmark requirement using the pass/fail determination provided above. If a facility is unable to pass the benchmark requirement after the twelve (12) month sampling period following a second round of implementing supplemental BMPs, then EPD will determine what further action is required, which may include, but is not limited to, applying for an individual NPDES permit.

d. Written justification to cease Part III:C sampling.

If a facility provides a written justification after the first twelve (12) month period of sampling (or after any subsequent twelve (12) month period of sampling) and EPD concurs that the facility's stormwater discharges associated with industrial activity do not have a reasonable potential to cause or contribute to a violation of an instream water quality standard, then EPD may conclude that additional sampling under Part III.C is not required. Facilities that have passed the benchmark requirement are not required to submit a written justification in order to cease Part III.C sampling.

2. Discharges into, or within one (1) linear mile upstream of and within the same watershed as, any portion of an Impaired Stream Segment impaired for fecal coliform.

Facilities discharging into, or within one (1) linear mile upstream of and within the same watershed as, any portion of an Impaired Stream Segment for which the listing criterion is identified as fecal coliform must adhere to the following conditions if industrial materials or

activities that are potential sources of fecal coliform (as defined in Part IV.D.9 of this permit) are, or may be, exposed to stormwater at the facility during the term of this permit.

a. List of BMPs for animal processing plants that may be potential sources of fecal coliform.

A list of BMPs designed to reduce fecal coliform levels in stormwater runoff has been developed for animal processing plants that may be potential sources of fecal coliform. Other facilities may find this list to be useful as well. The list is provided in Appendix C of this permit.

b. Sampling schedule.

Regulated industrial facilities that are subject to the requirements in Part III.C.2 of this permit must conduct stormwater discharge sampling for TSS two times per quarter for a period of twelve (12) months. Two of the sampling events must include simultaneous testing of TSS and fecal coliform. The sampling will only be required for those outfalls at the facility that have the potential to discharge stormwater associated with industrial activity where industrial materials or activities that are potential sources of fecal coliform (as defined in Part IV.D.9 of this permit) are, or may be, exposed to stormwater at the facility during the term of this permit. The sampling must be conducted in accordance with Parts VI.A.3, 4, and 5 of this permit.

Except as provided below, the sampling must begin no later than ninety (90) days after the later of the effective date of the permit or the date the facility becomes subject to the sampling requirements in Part III.C. However, if a facility with an existing stormwater discharge associated with industrial activity determines that additional time is needed to design and implement new or improved BMPs specifically for the pollutant(s) of concern, then that facility may delay commencement of the sampling program under this section of the permit for no more than twelve (12) months after the effective date of the permit in order to design and implement those BMPs. Facilities choosing this option must, no later than the date on which the Part III.C sampling would otherwise begin, provide a written notification, signed in accordance with Part VII.G of this permit, to EPD that they have elected to delay sampling and provide a schedule for BMP implementation. The Part III.C sampling program must begin immediately after the BMPs are required to have been implemented according to the schedule provided to EPD.

A summary of the sampling results for TSS and fecal coliform must be submitted to EPD's Watershed Protection Branch with the Annual Report (see Appendix B of this permit). The report must also identify the applicable benchmark value(s) and state whether the facility has passed or failed the benchmark requirement for the twelve (12) month sampling period.

If a facility is unable to conduct one or both of the Part III.C sampling event(s) during a certain quarter due to adverse climatic conditions (i.e. no qualifying rainfall event occurs), then the facility shall include a written explanation for the absence of the sampling event in the next Annual Report submitted to EPD.

c. Applicable Benchmark Value

A Total Suspended Solids (TSS) benchmark value of 100 mg/l will be used as a surrogate for evaluating fecal coliform levels in stormwater discharges associated with industrial activity. Fecal coliform sampling data collected simultaneously with TSS sampling data (as required in

Part III.C.2.b) is not subject to the pass/fail determination for benchmark sampling as established in Part III.C.2.d below.

The TSS benchmark value is designed to assist permittees in determining if the implementation of the BMPs (as established in a facility's SWP3) is minimizing the concentration of the pollutant(s) of concern in stormwater discharge(s) from their facility. These benchmark values are intended to be guideline concentrations rather than numeric effluent limitations or permit conditions. The exceedance of a benchmark value established in Part III.C of this permit is not a permit violation and does not of itself indicate a violation of instream water quality standards. However, an exceedance of a benchmark value may be used in conjunction with other information to demonstrate a violation of this permit or a violation of water quality standards.

d. Evaluation of Part III.C sampling data.

The Part III.C stormwater discharge sampling is intended to measure the effectiveness of the Best Management Practices (BMPs) implemented at those facilities. If benchmark values are exceeded using the pass/fail determination provided below, then improved or additional BMPs are required at the facility.

The TSS sampling data for the twelve (12) month period must be evaluated using one of the following criteria. This shall constitute the pass/fail determination for evaluating BMP effectiveness.

(1). At least seventy-five (75) percent of the samples collected during the twelve (12) month period do not exceed the TSS benchmark value; or

(2). The average of the samples collected during the twelve (12) month period does not exceed the TSS benchmark value.

If a facility meets at least one of the above criteria then that facility has passed the TSS benchmark requirement and may discontinue the Part III.C sampling but must thereafter properly maintain all of the BMPs that enabled the facility to pass the TSS benchmark requirement.

If a facility does not meet at least one of the above criteria, then that facility has failed the TSS benchmark requirement. If a facility does not pass the TSS benchmark requirement for the first twelve (12) month sampling period then the facility may take up to one year to budget, select, design and construct/implement additional supplemental BMPs from the list provided in Appendix C, or other appropriate BMPs. Once the supplemental BMPs have been implemented at the facility, an additional twelve (12) month (two samples per quarter) period of sampling must be conducted as described in Part III.C.2.b above. Those facilities that pass the benchmark requirement, using the above pass/fail determination, after implementing supplemental BMPs may discontinue the Part III.C sampling but must thereafter properly maintain all of the BMPs that enabled the facility to pass the TSS benchmark requirement.

Facilities that are not able to pass the TSS benchmark requirement after implementing supplemental BMPs must continue the process of implementing additional supplemental BMPs from the Appendix C list, or other appropriate BMPs, (within twelve (12) months after the end of the previous twelve (12) month sampling period) and conducting a subsequent twelve month (two

samples per quarter) period of sampling until the facility passes the benchmark requirement using the pass/fail criteria provided above.

e. Written justification to cease Part III.C monitoring.

If a facility provides a written justification, after the first twelve (12) month period of sampling (or after any subsequent twelve (12) month period of sampling), and EPD concurs that the facility's stormwater discharges associated with industrial activity do not have a reasonable potential to cause or contribute to a violation of an instream water quality standard, then EPD may conclude that additional sampling under Part III.C is not required. Facilities that have passed the benchmark requirement are not required to submit a written justification in order to cease Part III.C sampling.

f. Demonstration of appropriate BMPs.

If a facility with a stormwater discharge associated with industrial activity that may be a potential source of fecal coliform has implemented all technologically and economically feasible BMPs in the Appendix C list (for animal processing facilities), or other appropriate BMPs (for other facilities), and is still unable to pass the TSS benchmark requirement, the owner or operator of that facility may submit a demonstration to EPD that the facility has properly designed, installed and maintained all of the BMPs that are technologically and economically feasible for the facility and still cannot meet the benchmark. If, after reviewing the demonstration and conducting a site inspection, EPD concurs with the facility's determination, then the facility will not be required to implement additional supplemental BMPs in order to comply with the permit. However, if new BMPs become technologically and economically feasible for the facility at a later date, then EPD may require the implementation of such BMPs at that time. EPD may also require an individual NPDES permit for a facility if that facility does not properly design, install and maintain technologically and economically feasible BMPs in a timely manner.

New Mexico

Phase I MS4 Permit for the City of Albuquerque

B. Area-specific Stormwater Management Program Requirements. Permittees are required to develop and implement measures necessary to bring the discharge into compliance with the Middle Rio Grande Total Maximum Daily Load (TMDL) for Fecal Coliform. Specific permit requirements to implement the TMDL are included in Part III, Table III.B. [Note: Table III.B. includes the implementation activities required, the co-permittees responsible and the schedule of compliance. The implementation activities in the table have been incorporated as text as follows:]

1.0 Source Categories. Develop and submit a list of potential categories of fecal coliform sources by watershed and watershed density (undeveloped, low, moderate, high), covering the entire permit area.

1.1 Legal Authority Evaluate adequacy of existing legal authority to implement the conditions included in this Table. Where existing ordinances are lacking, provide a schedule for obtaining the necessary legal authority. Ordinances shall be in place prior to the implementation of the programs.

2.0 Dry Weather Investigation. Develop and submit a dry weather field investigation program, by watershed, to identify and isolate fecal coliform sources that occur during dry weather so that they can be reduced/eliminated. The program shall address the sources identified in item 1.0 above. The program shall address the suitability of each of the following measures and shall include detailed description of activities and frequencies.

2.1 Low Density Watersheds:

2.1.1 Conduct dry weather channel survey

2.1.2 Conduct survey of septic systems (e.g. aerial, ground, etc.)

2.1.3 Conduct visual or tracer tests on suspected failing systems

2.1.4 Investigate recreational and seasonal sewage dischargers

2.1.5 Conduct ARA and study to determine whether fecal coliform s are of human or nonhuman origin

2.1.6 Test ditch or channel sediments to see if they are a bacteria source or reservoir

2.2 Moderate/High Density Watersheds:

2.2.1 Conduct dry weather channel survey

2.2.2 Test for Illicit connections

2.2.3 Check integrity of major trunk lines for cracks and leaks

2.2.4 Check for historic and unconnected septic systems

2.2.5 Conduct ARA and study to determine whether fecal coliform s are of human or nonhuman origin

2.2.6 Check ponds, lakes and impoundments for waterfowl concentrations

3.0 Wet Weather Investigation Develop and submit a wet weather field investigation program, by watershed, to identify and isolate fecal coliform sources that occur during wet weather so that they can be reduced/eliminated. The program shall address the sources identified in item 1.0 above. The program shall address the suitability of each of the following measures and shall include detailed description of activities and frequencies.

3.1 Low Density Watersheds

3.1.1 Inspect septic systems for wet-weather failure

3.1.2 Conduct comprehensive wet weather monitoring to isolate subwatershed hot spots

3.1.3 Submit results of the Antibiotic Resistance Analysis and the study to determine whether fecal coliforms are of human or nonhuman origin

3.1.4 Sample runoff from suspected source areas (e.g. hobby farms and livestock areas)

3.1.5 Test storm drain or channel sediments to see if they are a bacteria sink or source

3.2 Moderate/High Density Watersheds:

3.2.1 Check for chronic sanitary sewer overflows at specific manholes and /or pumping stations

3.2.2 Submit results of the Antibiotic Resistance Analysis and the study to determine whether fecal coliforms are of human or nonhuman origin

3.2.3 Conduct comprehensive wet weather monitoring to identify key source areas or subwatersheds

4.0 Submit certification of the full implementation of the dry and wet weather field investigation programs.

5. 0 Fecal Coliform Reduction and Treatment Develop and submit a program for reducing or treating existing fecal coliform sources, by watershed and watershed density. The program shall address the sources identified in items 3.0 and 4.0 above. The program shall address the suitability of each of the following measures and shall include detailed description of activities and frequencies. Where activities are to be performed by entities other than the permittee, describe enforcement mechanism to be used to ensure compliance.

5.1 Low Density Watersheds

5.1.2 Rehabilitate failing septic systems
5.1.3 Connect failing septic systems to sewer
5.1.4 Increase sep tic system clean outs
5.1.5 Retrofit stormwater ponds
5.1.6 Retrofit ditches as dry swales
5.1.7 Waterfowl management
5.1.8 Install recreational vehicle sewage pumpouts
5.1.9 Implement conservation plans at hobby farms

5.2 Moderate/High Density Watersheds:

5.2.2 Eliminate illicit connections to storm sewer
5.2.2 Rehabilitate existing sewer system to eliminate sanitary sewer overflows
5.2.3 Relocate storm outfalls
5.2.4 Disinfect at the end of pipe
5.2.5 Retrofit stormwater ponds
5.2.6 Retrofit ditches as dry swales
5.2.7 Waterfowl harassment
5.2.8 Enforce pet waste disposal
5.2.9 Implement conservation plans at hobby farms

6.0 Submit certification of the full implementation of fecal coliform reduction and treatment program.

7.0. Prevention of Future Fecal Discharges Develop and submit a program for preventing future fecal coliform discharges, by watershed. The program shall address at a minimum, the measures included below, with detailed description of activities and frequencies. Where activities are to be performed by entities other than the permittee, describe enforcement mechanism to be used to ensure compliance.

7.1 Low Density Watersheds

7.1.1 Land use management
7.1.2 Stringent septic system requirements:
7.1.2.1 Feasibility criteria
7.1.2.2 Setbacks
7.1.2.3 Reserve field requirements
7.1.2.4 Minimum lot size
7.1.2.5 Technology criteria
7.1.2.6 Inspections
7.1.2.7 Maintenance requirements
7.1.3 Stream/ ditches buffers and access restrictions
7.1.4 Livestock fencing
7.1.5 Wildlife control
7.1.6 Land application criteria for biosolids

7.1.7 Stormwater treatment for new development
7.1.8 Public education
7.1.9 Recreational vehicle and park sewage pump-out facilities
7.2 Moderate/High Density Watersheds:
7.2.1 New Sewer Testing
7.2.2 Inspection of new sewer hookups
7.2.3 SSO monitoring and prevention
7.2.4 Stormwater treatment for new development
7.2.5 Optimal stormwater outfall location
7.2.6 Engineered stream buffers
7.2.7 Pet Exclusion
7.2.8 Waterfowl control /management
7.2.9 Public education on pet waste
7.2.10 Transient sewage disposal
7.2.11 Septic system rehabilitation

8.0 Submit certification of the implementation of the program to prevent future fecal coliform sources.

9.0 Monitoring Program Develop a monitoring program, in consultation with the State of New Mexico, to assess BMP effectiveness and compliance with Fecal Coliform TMDL at North Diversion Floodway Channel, San Jose Drain, South Diversion Channel and Tijeras Arroyo. Target values and equation for comparison of loadings are included in Table III.B.2 below. While developing this monitoring program, the permittees should take into account the frequency of storm events, and the variation in Fecal Coliform levels, within individual storm event. Collection and analysis of samples shall be conducted in accordance with Part V requirements. Results shall be submitted in Discharge Monitoring Report (DMR) forms.

10.0 Submit certification of the full implementation of the monitoring program to assess BMP effectiveness.

11.0 BMP Assessment Submit BMP evaluations and assessment, and revisions to the programs above if deemed necessary, based on monitoring data obtained.

12. 0 Annual TMDL Progress Reports The permittees shall submit annual reports describing progress on the activities required in Table III.B. to comply with the Fecal Coliform TMDL. The reports shall follow the requirements included in Part V.C, items 1, 4, 6 and 7, but shall be submitted separately from the Annual Report covering all other items of the permit. Results of the monitoring program shall be summarized in the Annual TMDL Progress Report and shall include graphic representation of fecal coliform trends. The Annual TMDL Progress Report shall also include computations of annual percent reduction achieved from the baseline loads and comparisons with the target loads.

Ohio

Big Darby Creek Watershed Construction General Permit

F. Total Maximum Daily Load (TMDL) allocations

This general permit requires control measures/BMPs for construction sites that reflect recommendations set forth in the U.S. EPA approved Big Darby Creek TMDL.

G. SWP3 Requirements

G2. Controls.

*2b. **Riparian Setback Requirements**. The SWP3 shall clearly delineate the boundary of required stream setback distances. No construction activity shall occur within the delineated setback boundary except activities associated with restoration or recovery of natural floodplain and channel form characteristics as described in Attachment B and storm water conveyances from permanent treatment practices. Such conveyances must be designed to minimize the width of disturbance. If intrusion within the delineated setback boundary is necessary to accomplish the purposes of a project then mitigation shall be required in accordance with Part III.G.2.c of this permit. Streams requiring protection under this section are defined as perennial, ephemeral or intermittent streams with a defined bed, bank or channel. National Resources Conservation Service (NRCS) soil survey maps should be used as one reference and the presence of a stream requiring protection should also be confirmed in the field. Any required setback distances shall be clearly displayed in the field prior to any construction related activity.*

Riparian setbacks shall be delineated based upon one of the following three methods:

i. The setback distance from the centerline of the stream shall be sized as the greater of the following:

1. The regulatory 100 year floodplain based on FEMA mapping;

2. A minimum of 100 feet on each side; or

3. Distance calculated using the following equation:

$W = 133DA^{0.43}$
where:
DA = drainage area (mi^2)
W = total width of riparian setback (ft)

W should be divided by two (2) in order to calculate the setback for one side of the stream. If the DA remains relatively constant throughout the stretch of interest, then the DA of the downstream edge of the stretch should be used. Where there is a significant increase in the DA from the upstream edge to the downstream edge of the area of interest, the setback width shall increase accordingly.

ii. Site Specific Riparian Setback Delineation. The total setback width shall be the streamway width centered over the meander pattern of the stream plus an additional 100 feet from the edge of the streamway per side.

The streamway width shall be calculated as described in Part III.G.2.b.i.3 or as ten times the bankfull width determined from sufficient site specific information adequate to characterize the channel through the site by a professional experienced in stream morphology. The average site specific bankfull width may be used if the bankfull width does not vary significantly throughout the reach of interest. Otherwise the streamway width should vary with bankfull width. Centering about the meander pattern can be thought of as determining where a line representing the streamway width would evenly intersect equal elevation lines on either side of the stream.

iii. Stream Restoration with 100 feet (each side) Riparian Setback. Each stream segment within the proposed site boundaries can be assessed in accordance with Attachment B. In the event the stream segment is classified as a "Previously Modified Low Gradient Headwater Stream", the permittee has the option to restore the stream segment in accordance with Attachment B and include a 100 feet water quality setback distance from the centerline of the stream on each side. In the event the stream segment exceeds the minimum criteria in Attachment B to be classified as a "Previously Modified Low Gradient Headwater Stream", Part III.G.2.b.iii may be considered on a case-by-case basis. No structural sediment controls (e.g., the installation of silt fence or a sediment settling pond) or structural post-construction controls shall be used in a stream or the delineated setback.

2i. ***Post-Construction Storm Water Management Requirements****. So that receiving stream's physical, chemical, and biological characteristics are protected and stream functions are maintained, post-construction storm water practices shall provide perpetual management of runoff quality and quantity. To meet the post-construction requirements of this permit, the SWP3 must contain a description of the post-construction BMPs that will be installed during construction for the site and the rationale for their selection. The rationale must address the anticipated impacts on the channel and floodplain morphology, hydrology, and water quality.*

Detail drawings and maintenance plans shall be provided for all postconstruction BMPs. Maintenance plans shall be provided by the permittee to the post-construction operator of the site (including homeowner associations) upon completion of construction activities (prior to termination of permit coverage). A description of maintenance operations must be included in the maintenance agreement to ensure all Post Construction BMP's will be maintained in perpetuity. For sites located within a community with a regulated municipal separate storm sewer system (MS4), the permittee, land owner, or other entity with legal control of the property may be required to develop and implement a maintenance plan to comply with the requirements of the MS4. Maintenance plans must ensure that pollutants collected within structural post-construction practices, be disposed of in accordance with local, state, and federal regulations. Permittees, except for those regulated under the small MS4 program, are not responsible under this permit for operation and maintenance of post-construction practices once coverage under this permit is terminated.

This permit does not preclude the use of innovation or experimental postconstruction storm water management technologies. However, the director may require discharges from such structures to be monitored to ensure compliance with Part III.G.2.i of this permit. The installation of structural controls in certain scenarios may also require a separate permit under section 404 of the CWA. Permittees are only responsible for the installation and maintenance of storm water management measures prior to final stabilization of the site and are not responsible for maintenance after storm water discharges associated with construction activity have been

eliminated from the site. However, post-construction storm water BMPs that discharge pollutants from point sources once construction is completed, may in themselves, need authorization under a separate NPDES permit.

Linear construction projects, (e.g., pipeline or utility line installation), which do not result in the installation of impervious surface, are not required to comply with the conditions of Part III.G.2.i of this permit. However, linear construction projects must be designed to minimize the number of stream crossings and the width of disturbance.

Large Construction Activities. For all large construction activities (involving the disturbance of five or more acres of land or will disturb less than five acres, but is a part of a larger common plan of development or sale which will disturb five or more acres of land), the post construction BMP(s) chosen must be able to detain storm water runoff for protection of the stream channels, stream erosion control, and improved water quality. Structural (designed) post-construction storm water treatment practices shall be incorporated into the permanent drainage system for the site. The BMP(s) chosen must be sized to treat the water quality volume (WQ_v) and ensure compliance with Ohio's Water Quality Standards in OAC Chapter 3745-1. The WQ_v shall be equivalent to the volume of runoff from a 0.75-inch rainfall and shall be determined according to one of the two following methods:

i. Through a site hydrologic study approved by the local municipal permitting authority that uses continuous hydrologic simulation and local long-term hourly precipitation records or ii. Using the following equation:

$WQv = C * P * A / 12$
where:
WQ_v = *water quality volume in acre-feet*
C = *runoff coefficient appropriate for storms less than 1 inch (see Table 5)*
P = *0.75 inch precipitation depth*
A = *area draining into the BMP in acres*

An additional volume equal to 20 percent of the WQ_v shall be incorporated into the BMP for sediment storage and/or reduced infiltration capacity. Ohio EPA recommends that BMPs be designed according to the methodology included in the most current edition of the Rainwater and Land Development manual or in another design manual acceptable for use by Ohio EPA.

BMPs shall be designed such that the drain time is long enough to provide treatment, but short enough to provide storage available for successive rainfall events as described in Table 6 below.

The permittee may request approval from Ohio EPA to use alternative structural post-construction BMPs if the permittee can demonstrate that the alternative BMPs are equivalent in effectiveness to those listed in Table 6 above. Construction activities shall be exempt from this condition if it can be demonstrated that the WQ_v is provided within an existing structural post-construction BMP that is part of a larger common plan of development or if structural post-construction BMPs are addressed in a regional or local storm water management plan.

For redevelopment projects (i.e., developments on previously developed property), post-construction practices shall either ensure a 20 percent net reduction of the site impervious area, provide for treatment of at least 20 percent of the WQ_v, or a combination of the two.

Small Construction Activities. For all small land disturbance activities (which disturb one or more, but less than five acres of land and is not a part of a larger common plan of development or sale which will disturb five or more acres of land), a description of measures that will be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed must be included in the SWP3. Structural measures should be placed on upland soils to the degree attainable.

i. Such practices may include, but are not limited to: storm water detention structures (including wet basins); storm water retention structures; flow attenuation by use of open vegetated swales and natural depressions; infiltration of runoff onsite; and sequential systems (which combine several practices). The SWP3 shall include an explanation of the technical basis used to select the practices to control pollution where flows exceed pre-development levels.

ii. Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel to provide non-erosive flow velocity from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g., no significant changes in the hydrological regime of the receiving water).

Big Darby Creek Watershed TMDL

5.0 Implementation of the Big Darby Creek TMDL

A key objective for preserving or restoring the high quality aquatic communities in the Big Darby Creek watershed is to determine ways for human activities to proceed without disrupting the existing natural system. Human intervention usually happens on a local scale. A small swale or ditch is often viewed locally as a conduit for exporting water so that the products of human pursuits can be maximized. But the system as a whole has a finite capacity. The cumulative impact of local interventions in the system has grown to the point that the system can no longer assimilate the changes, particularly in the upper Big Darby Creek watershed, Treacle Creek, Robinson Run and Hellbranch Run. These local interventions are happening from all aspects of our society, as such, solutions will need to come from all aspects of our society. This chapter of the TMDL report outlines the ways to implement the guidelines and loading reductions provided in Chapter 4. Achievement of these are necessary to maintain the Big Darby Creek watershed as a high quality aquatic system.

5.1 Implementation Mechanisms

Stream integrity concepts are discussed in Chapters 3 and 4, as well as the establishment of allowable loads for pollutants, and effluent limitations for point source dischargers. A variety of mechanisms will be evaluated and used to achieve these loading reductions. These mechanisms are discussed in more detail below.

5.1.1 Storm Water Control

Storm water control is largely achieved through the issuance of general permits under the NPDES program. These permits are issued for construction activities, and for industrial activities, and are issued to control storm water that is discharged from a discrete conveyance, such as pipes or confined conduits. NPDES individual and general permits are issued to

individuals, private entities, and local government entities. These permits function together to form a web of state and local authority under which storm water is controlled.

General Permits For Construction Storm Water

Ohio EPA has issued a draft general permit for runoff associated with construction activity that is specific to the Big Darby Creek watershed. Ohio EPA has used existing permit terms and conditions and has included new types of permit terms and conditions to ensure, to the extent authorized by law, that loading targets developed in Chapters 3 and 4 are achieved for storm water. These permit terms and conditions include management practices, effluent targets, infiltration requirements necessary to support stream base flows and stream setbacks necessary to protect the stream channel. The goal is to issue a permit that is protective of the aquatic life uses in the Big Darby Creek watershed.

As is the case with the existing construction storm water general permit, construction companies will be expected to be co-permittees along with developers. This condition of the permit will be an area of emphasis by Ohio EPA in evaluating compliance with the general permit for storm water from construction activity.

Phase I and Phase II MS4 Permits For Local Jurisdictions

Federal storm water regulations call for the issuance of Phase I NPDES storm water permits to large municipalities, and the issuance of Phase II NPDES storm water permits to smaller municipalities. As with the general permits for construction storm water, Ohio EPA intends to revise the MS4 permits, to the extent authorized by law, so as to achieve the loading limitations established in Chapter 4 of this TMDL for storm water. Ohio EPA expects to exercise its authority to designate additional Phase II communities within the Big Darby Creek watershed and to ensure that the permits issued to those jurisdictions are protective of the aquatic life uses.

Oregon

Columbia Slough TMDL

The DMAs will conduct monitoring of stormwater BOD5 loads and the instream response to those loads. Previous monitoring under the MS4 permits has measured BOD5 levels from urban runoff that do not correlate with the few instream BOD5 samples taken during storm events. The discrepancy between loads and instream concentration is likely due to processes such as deposition and decay during the transport to the receiving water. The monitoring data will be used to calibrate a dynamic water quality model to simulate the Slough's response to stormwater and deicing fluid. The DMA WLA will not be included as an effluent limit. Achievement of the WLA will be through implementation of BMPs. Municipal discharges will be required to implement BMPs and demonstrate that the BMPs achieve the WLAs established. The DMAs will be required, through MOAs, to:

1. Provide DEQ with a description of the program designed to reduce BOD5 loads to the Slough.

2. Implement a program of BMPs that will reduce overall BOD5 load to achieve the DMA WLAs.

3. Implement coordinated monitoring to define stormwater loads to the Slough and the influence of stormwater BOD5 on receiving water quality.

4. Implement monitoring to demonstrate compliance with BOD5 WLA targets. Instream monitoring will include grab samples of BOD5 and DO and continuous hydrolab monitoring.

5. Implement water quality management plans as developed as part of the Lower Willamette Subbasin plan (projected completion spring 1999).

Phase I MS4 Permit for City of Gresham, City of Fairview, and Multnomah County

The requirements of this section [p. 17] apply to co-permittee's MS4 discharges to receiving waters with established TMDLs and associated allocations as noted on page 1 of this permit. It is the intent of this section to ensure that pollutant discharges for those parameters listed in the TMDL are reduced to the maximum extent practicable. Adequate progress toward achieving assigned wasteload allocations (WLAs) will be demonstrated through the implementation of best management practices that are targeted at TMDL related pollutants.

i) Progress towards reducing TMDL pollutant loads must be evaluated by the co-permittee through the use of performance measures and pollutant load reduction benchmarks developed and listed in the SWMP.

(1) Performance measures are estimates of the effectiveness of various best management practices (BMPs) implemented by the co-permittees as per the SWMP; and they are not numeric effluent limits. Performance measures must, where appropriate, be pollutant reduction estimates. The performance measures for the BMPs addressing TMDL pollutants may be based on the same metrics developed in accordance with the program effectiveness monitoring requirements in Schedule B(1)(c)(i).

(2) A benchmark is a total pollutant load reduction estimate for each parameter or surrogate, where applicable, for which a WLA is established at the time of permit issuance. A benchmark is used to measure the overall effectiveness of the stormwater management plan in making progress toward the wasteload allocation (this estimate will be related to the statistical variability of the underlying data and may be stated as a range), and is intended to be a tool for guiding adaptive management activities. A benchmark is not a numeric effluent limit; rather it is a goal that is subject to the maximum extent practicable standard. The co-permittee must provide the rationale for the proposed benchmark, which includes an explanation of the relationship between the benchmarks and the TMDL wasteload allocations. Any limiting factors related to the development of a benchmark, such as data availability and data quality, must also be included in this rationale.

ii) The SWMP must describe a program that includes BMPs, monitoring triggers, narrative conditions, or other elements, designed to achieve reductions in the TMDL pollutants. The SWMP must include a specific strategy for implementing monitoring designed to enable the co-permittee to gauge the effectiveness of the SWMP in reducing TMDL pollutant loads to the maximum extent practicable.

iii) When the co-permittee applies for permit renewal, the co-permittee must include an evaluation of the effectiveness of the stormwater management plan with respect to all pollutant

parameters addressed in an applicable TMDL. This evaluation must assess progress towards meeting the pollutant load reductions (benchmarks) using the reporting and monitoring programs and other methods described in Schedules B(1), B(2) and D(2)(d)(v) of this permit. If the co-permittee has failed to meet the estimated pollutant load reductions during the permit term, they must use the adaptive management process described in Schedule D(2)(a)of this permit to reassess the SWMP and determine what additional or alternative BMPs are practicable. The co-permittee must update the SWMP to include these BMPs. The co-permittee must submit the evaluation and any SWMP revisions to the Department as specified in Schedule D(2)(d)(v).

iv) If within three (3) years following permit issuance a TMDL is approved by the Environmental Protection Agency (EPA) and the TMDL has wasteload allocations assigned to stormwater within the geographic area covered by this permit, the co-permittee must, at the time of the next permit renewal application, complete a review and strategy development, and propose changes, if appropriate, to the SWMP to address the urban stormwater discharges.

v) If, at the time of permit issuance, TMDL wasteload allocations have been established for pollutant parameters associated with the MS4's discharges, each co-permittee must, as appropriate, review their SWMP to determine its adequacy in reducing TMDL pollutant discharges to the maximum extent practicable and develop pollutant load reduction benchmark(s) and performance measures in the SWMP as defined in Schedule D(2)(d)(i)(1) and (2). As part of the SWMP review and benchmark and performance measure development process, the co-permittee must document, and subsequently report in accordance with Schedule B(2)(b), the following information:

(1) A description of the methodology and rationale used to develop and select pollutant reduction benchmarks and performance measures. The methodology must address current estimated discharge loadings and TMDL wasteload allocations.

(2) Any proposed modifications to the SWMP resulting from the adaptive management process [Schedule D(2)(a)] necessary to give reasonable assurance that the SWMP is designed to reduce TMDL pollutants to the maximum extent practicable. This must include selection of BMPs and any assumptions related to the proposed BMPs.

(3) Any proposed modifications to the monitoring component of the SWMP that are necessary to ensure adequate data and information are collected to assess SWMP implementation, BMP effectiveness, progress towards the pollutant load reduction (4) A description of the public participation process, including a summary of material public comments and the responses to those comments.

The requirements of this section apply to receiving waters without established TMDL wasteload allocations. The co-permittee must qualitatively review the pollutants that are on the 2002 303(d) list that are relevant to the co-permittee's MS4 discharges. This review and corresponding summary of proposed actions must be incorporated into the interim evaluation report. The review and summary must accomplish the following:

i) Determine whether there is a reasonable likelihood for stormwater from the MS4 to cause or contribute to water quality degradation of receiving waters through the discharge of pollutants

on the 2002 303(d) list. Provide the rationale for the conclusion, including the results of an evaluation.

ii) If the discharges from the MS4 is a contributor to specific listed pollutants, determine and describe the relationship between the 303(d) listed pollutant and the MS4 discharges.

iii) Determine whether the BMPs in the existing SWMP are effective to address the 303(d) pollutants. If not, describe how the plan could be adapted to more appropriately address these pollutants. A summary of the rationale for this determination must also be included in the report. If sufficient information is not available to make the determinations required above, the co-permittee must compile pertinent information necessary to adequately complete these determinations.

The Interim Evaluation Report is to include: i) An evaluation of, and proposed revisions to, the SWMP that addresses the requirements of Schedules D(2)(b) and B(1)(b), including the rationale supporting the proposed revisions. ii) A description of the current source identification components of the SWMP and the rationale regarding the adequacy of these components. iii) For each of the listed non-stormwater discharges [Schedule A(3)] expected to occur in a copermittee's area, the co-permittee must identify the appropriate control measures and the rationale for the selection of these BMPs (or the rationale for why BMPs are deemed not necessary). iv) The required information regarding TMDL pollutants as described in Schedule D(2)(d)(v) and the corresponding proposed revisions to the SWMP, and/or the required information regarding 303(d) listed pollutants as described in Schedule D(2)(e) and the corresponding proposed revisions to the SWMP. v) An executive summary of the SWMP, no more than 15 pages in length, that describes the main elements of the SWMP. vi) Maps providing updated information as described in 40 CFR §122.26(d)(1)(iii)(B), where applicable.

Draft Phase II MS4 Permit

The requirements of this section apply to MS4 discharges to receiving waters with established TMDLs and associated wasteload allocations as noted on page 1 of this permit or if the permittee becomes subject to an approved TMDL, and following notice of such by the Department. If the permittee reduces applicable pollutant discharges for the parameters listed in the TMDL to the maximum extent practicable, this reduction is deemed to be adequate progress toward achieving assigned TMDL wasteload allocations (WLAs).

a) Progress towards reducing TMDL pollutant loads will be evaluated, in subsequent permit terms, by the permittee through the use of performance measures and pollutant load reduction benchmarks developed and listed in the SWMP.

(1) Performance measures are estimates of the effectiveness of various best management practices (BMPs) implemented by the permittee as per the SWMP; and are not numeric effluent limits. Performance measures must, where appropriate, be pollutant reduction estimates. If appropriate, the performance measures for the BMPs addressing TMDL pollutants may be based on the same metrics developed to determine progress towards measurable goals, as described in the SWMP.

(2) A pollutant load reduction benchmark is an estimate for each parameter or surrogate, where applicable, for which a WLA is established. A benchmark is used to measure the overall

effectiveness of the stormwater management program in making progress toward the WLA (this estimate will be related to the statistical variability of the underlying data and may be stated as a range), and is intended to be a tool for guiding adaptive management activities. A benchmark is not a numeric effluent limit; rather it is a goal. The permittee must provide the rationale for the proposed benchmark, which includes an explanation of the relationship between the benchmarks and the TMDL wasteload allocations. Any limiting factors related to the development of a benchmark, such as data availability and data quality, must also be included in this rationale.

b) The permittee must use adaptive management, as described in Schedule A(3), to focus and refine SWMP elements to address TMDL wasteload allocation(s) over the course of this permit cycle.

c) If, at the time of permit issuance or within three (3) years of permit issuance, a TMDL establishes municipal stormwater wasteload allocations for pollutant parameters associated with the MS4's discharges, the permittee must develop and propose to the Department specific performance measures and pollutant load reduction benchmarks, as described in Schedule D(2)(a). Performance measures and pollutant load reduction benchmarks must be submitted to the Department as part of the permit renewal package described in Schedule B(3).

Pennsylvania

Wissahickon Creek TMDL

The reference watershed approach is based on determining the current loading rates for the pollutants of interest from a selected unimpaired watershed that has similar physical characteristics (i.e., landuse, soils, size, geology) to those of the impaired watershed. The objective of this process is to reduce the loading rate of sediment (or other pollutant) in the impaired stream segment to a level equivalent to or slightly lower than the loading rate in the unimpaired reference stream segment.

Tennessee

Harpeth River E. coli TMDL

SWMPs must include a section describing how discharges of pollutants of concern will be controlled to ensure that they do not cause or contribute to instream exceedances of water quality standards. Specific measures and BMPs to control pollutants of concern must also be identified. In addition, MS4s must implement the WLA provisions of an applicable TMDL and describe methods to evaluate whether stormwater controls are adequate to meet the WLA. In order to evaluate SWMP effectiveness and demonstrate compliance with specified WLAs, MS4s must develop and implement appropriate monitoring programs. Instream monitoring, at locations selected to best represent the effectiveness of BMPs, must include analytical monitoring of pollutants of concern. A detailed plan describing the monitoring program must be submitted to the Division of Water Pollution Control Nashville Field Office within 12 months of the approval date of this TMDL. Implementation of the monitoring program must commence within 6 months of plan approval by the Field Office. The monitoring program shall comply with

the monitoring, recordkeeping, and reporting requirements of NPDES General Permit for Discharges from Small Municipal Separate Storm Sewer Systems.

Phase II MS4 General Permit

1. *Determine whether stormwater discharge from any part of the MS4 significantly contributes directly or indirectly to a 303(d) listed (i.e., impaired) waterbody. Water quality impaired waters means any segment of surface waters that has been identified by the division as failing to support classified uses. If you have discharges meeting these criteria, you must comply with Part 3.1.1.2 and 3.1.2; if you do not, the remainder of this Part 3.1 does not apply to you.*

2. *If you have "303(d)" discharges described above, you must also determine whether a Total Maximum Daily Load (TMDL) has been developed by the division and approved by EPA for the listed waterbody. If there is a TMDL, you must comply with both Parts 3.1.2 and 3.1.3; if no TMDL has been approved, Part 3.1.3 does not apply until a TMDL has been approved.*

3. *Water Quality Controls for Discharges to Impaired Waterbodies. The stormwater management program review submitted to the division must include a section describing how your program will control the discharge of the pollutants of concern. This section must identify the measures and BMPs that will collectively control the discharge of the pollutants of concern. The measures should be presented in order of priority with respect to controlling the pollutants of concern.*

4. *Consistency with Total Maximum Daily Load (TMDL). If a TMDL has been approved for any waterbody into which you discharge, you must follow the procedure below and report on these activities in annual reports to the division:*

5. *Determine whether the approved TMDL is for a pollutant likely to be found in stormwater discharges from your MS4.*

6. *Determine whether the TMDL includes a pollutant wasteload allocation (WLA), implementation recommendations, or other performance requirements specifically for stormwater discharges from your MS4.*

7. *Determine whether the TMDL addresses a flow regime likely to occur during periods of stormwater discharge.*

8. *After the determinations above have been made and if it is found that your MS4 must implement specific provisions of the TMDL, evaluate whether the implementation of existing stormwater control measures is meeting the TMDL provisions, or if additional control measures are necessary.*

9. *Document all control measures currently being implemented or planned to be implemented. Include a schedule of implementation for all planned controls. Provide your rationale (e.g., calculations, assessments, reports and/or other evidence) that shows that you will comply with the TMDL provisions. For control measures that are expected to be implemented and evaluated beyond the term of this permit, you should also include longer schedule of implementation as necessary to describe the control measure.*

10. Describe a method to evaluate whether the stormwater controls are adequate to meet the requirements of the TMDL.

11. If the evaluation shows that additional or modified controls are necessary, describe the type and schedule for the control additions/revisions.

Vermont

Phase II General MS4 Permit

Your SWMP, including your operation and maintenance program for preventing or reducing pollutant runoff from municipal operations prepared pursuant to section 4.2.6, must include a section describing how your program will control to the maximum extent practicable the discharge of the pollutants of concern. This discussion must specifically identify measures and BMPs that will collectively control the discharge of the pollutants of concern. Pollutant(s) of concern refer to the pollutant identified as causing the impairment.

As set forth in 1.3.7 in implementing the six minimum control measures set forth in 4.2 you must be consistent with recommendations applicable to your MS4 in the implementation section of the Lake Champlain TMDL and any future TMDLs for impaired waters affected by your MS4 established or approved by EPA pursuant to section 303(d) of the federal Clean Water Act. The Lake Champlain Phosphorus TMDL recommendations for municipalities include: adoption of erosion controls (page 65), improved construction and maintenance practices for gravel backroads (page 69), promotion of riparian buffers and setbacks (page 76) and impervious surface minimization (page 76). 3.1.4. Determination of Consistency. The assessment of whether your Stormwater Management Program is consistent with TMDL recommendations will be based on your implementation and maintenance of best management practices not on estimates or measurements of pollutant loading does not authorize a direct discharge that is inconsistent with any EPA approved TMDL waste load allocation and any implementation plan for the waterbody to which the direct discharge drains. This general permit does not authorize a discharge to an impaired waterbody for which the Department has issued a watershed-specific general permit.

Washington

Draft Phase II MS4 General Permit (Western Washington)

An example of TMDL specific requirements is as follows:

***Name of TMDL:** Snohomish River Tributaries*
Location of Original 303 (d) Listings – WA-07-1012, WA-07-015, WA-07-1052, WA-07-1163WA-07-1163, WA-07-1030 and WA-07-040
Area where TMDL Requirements Apply:
For each waterbody listed, TMDL coverage includes areas draining to the WASWIS segment number, and all the upstream tributaries contributing to it: Allen Creek, YT94RF: Quilceda Creek, TH58TS: French Creek, XZ24XU: Woods Creek, FZ74HO:

Pilchuck River, NF79WA: Marshland Watershed, XW79FQ
TMDL coverage includes the areas indicated in the Lower Snohomish River Tributaries Fecal Coliform Bacteria TMDL Detailed Implementation Plan dated June 2003, Figure 3, page 7. This TMDL can be found at http://www.ecy.wa.gov/programs/wq/tmdl/watershed/tmdl_info-nwro.html
***Parameter** – Fecal Coliform*
***Approval Date** – 9 – Aug. 2001*
***Potential MS4 Permittees** – Phase I permit: Snohomish County*
***Phase II permit**: Granite Falls, Lake Stevens, Monroe, Snohomish, Marysville, Arlington, Everett*
***WSDOT permit**: WSDOT.*
Action Required –
Baseline Requirements: Within 12 months after the effective date of this permit, all municipal stormwater permittees must adopt and enforce an ordinance or ordinances requiring the application of source control BMPs for the following existing land uses if they occur within their jurisdiction: 1) commercial animal handling areas, and 2) commercial composting facilities.

Where these activities are not occurring, no action is required. BMPs shall be equivalent to those found in Volume IV of the 2001 Ecology Stormwater Management Manual for Western Washington. Ordinances shall also address illicit connections to storm drains.

Where potential sources of bacterial pollution exist, operational source control BMPs shall be required for all pollutant generating sources. Only in those cases where a facility is demonstrated to be causing a violation of surface or ground water standards, or is discharging illegally, shall structural source control BMPs shall be required as related to this TMDL. The provision for structural source control BMPs is not intended to apply to individual municipal stormwater outfalls.

No later than 12 months after the effective date of this permit, affected municipal permittees shall compile a list of the existing composting and animal waste handling facilities. This list shall be updated no later than 180 days prior to the expiration of the permit and submitted with the permit renewal application. Starting no later than 24 months after the effective date of this permit, conduct an inspection program for all the listed sites, with adequate enforcement capability to ensure implementation of source control BMPs. All facilities must be inspected with 40 months of the effective date of this permit.

***Monitoring and Implementation Requirements:** Permittees shall choose one or both of the following monitoring strategies. Strategy A is the default implementation strategy unless the permittee chooses to implement Strategy B in all or part of the area subject to the TMDL:*

Strategy A, Targeted Implementation Approach
- *Within 90 days of permit issuance, prepare and submit to Ecology for review, a Quality Assurance Project Plan (QAPP) for the sampling of streams and/or discharges from stormwater conveyances within the jurisdictions boundaries in order to determine areas with highest bacteria concentrations (high priority areas). Provisions for additional monitoring in high priority areas shall be included in order to locate pollution sources were they are not obvious.*

- *The QAPP shall be prepared following Ecology's "Guidelines for Preparing Quality Assurance Project Plans for Environmental Studies, Feb. 2001, Ecology Publication No. 01-03-003. Ecology will review and provide comments within 30 days the plan is received. The sampling plan shall include an adequate number of sampling points and adequate sampling frequency to reasonably characterize the receiving water or waste stream. Monitoring shall begin no later than 270 days after permit issuance.*

- *No later than 365 days prior to permit renewal application, a Bacterial Pollution Control Plan shall be developed. The Bacterial Pollution Control Plan shall, at a minimum, consider the use of the following approaches:*

  1) pet waste ordinance, 2) evaluation of water pollution control enforcement capabilities, 3) evaluation of CAO in relation to TMDL goals, 4) educational program directed at reducing bacterial pollution, 5) investigation and implementation of methods that prevent additional stormwater bacterial pollution through stormwater treatment, reducing stormwater volumes, and preventing additional sources of stormwater in association with new development, 6) implementation of activities in the Quilceda/Allen or French Creek Watershed Management Plans (as applicable), 7) ambient water quality and stormwater quality sampling to specifically identify bacterial pollution sources, and 8) livestock ordinance and compost ordinance (Phase I Permittees only.)

- *No later than 270 days prior to permit renewal application, conduct public review of the Bacterial Pollution Control Plan.*

- *Submit the final Bacterial Pollution Control Plan to Ecology at the time of permit renewal application.*

Strategy B: Early Action Approach.

- *Prepare Early Action BMP plan within 180 days of permit effective date. The Early Action Plan shall contain those BMPs that the permittee believes will be effective in reducing bacteria levels within the MS4 (or otherwise in local waters). The Early Action Plan must include implementation of the required baseline requirement for all municipal stormwater permittees including adoption and enforcement of ordinance(s) requiring the application of source control BMPs related to bacterial pollutants (equivalent to Volume IV of the 2001 Ecology Stormwater Management Manual for Western Washington).*

- *The Early Action BMP Plan shall, at a minimum, consider the use of the following approaches: 1) pet waste ordinance, 2) evaluation of water pollution control enforcement capabilities, 3) evaluation of CAO in relation to TMDL goals, 4) educational program directed at reducing bacterial pollution, 5) investigation and implementation of methods that prevent additional stormwater bacterial pollution through stormwater treatment, reducing stormwater volumes, and preventing additional sources of stormwater in association with new development, 6) implementation of activities in Quilceda/Allen or French Creek Watershed Management Plans (as applicable) Watershed Management Plan, 7) ambient water quality and stormwater quality sampling to specifically identify bacterial pollution sources, and 8) livestock and compost ordinances (Phase I permittees only)*

- *Conduct and complete public review of the Early Action BMP plan within 270 days of permit effective date.*

- *Begin implementation of Early Action BMPs as specified in the plan within 360 days of permit issuance. BMPs shall be place within 36 months of permit issuance unless otherwise approved by Ecology.*
- *Within 30 months of permit issuance, prepare and submit to Ecology for review, a Quality Assurance Project Plan (QAPP) for the sampling of streams and/or discharges from stormwater conveyances within the jurisdictions boundaries in order to assess whether or not affected water bodies and/or stormwater discharges, are meeting state water quality standards.*
- *The QAPP shall be prepared following Ecology's "Guidelines for Preparing Quality Assurance Project Plans for Environmental Studies, Feb. 2001, Ecology Publication No. 01-03-003. Ecology will review and provide comments within 30 days the plan is received. The sampling plan shall include an adequate number of sampling points and adequate sampling frequency to reasonably characterize the receiving water or waste stream. Monitoring shall begin no later than 36 months after permit issuance.*
- *No later than 270 days prior to permit renewal, a Bacterial Pollution Control Plan shall be developed. The Plan shall consider all available monitoring data and the approaches noted for the Early Action BMP Plan above.*
- *No later than 270 days prior to permit renewal application, conduct public review of the Bacterial Pollution Control Plan.*
- *Submit the Bacterial Pollution Control Plan to Ecology at the time of permit renewal application for review.*

Construction General Permit (state-wide)

S8. DISCHARGES TO 303(D) OR TMDL WATERBODIES

A. Sampling and Numeric Effluent Limitations For Discharges to 303(d)-listed Waterbodies

1. Permittees that discharge to water bodies listed as impaired by the State of Washington under Section 303(d) of the Clean Water Act for turbidity, fine sediment, high pH, or phosphorus, shall conduct water quality sampling according to the requirements of this section.

2. All references and requirements associated with Section 303(d) of the Clean Water Act mean the most current listing by Ecology of impaired waters that exists on November 16, 2005, or the date when the operator's complete permit application is received by Ecology, whichever is later.

B. Discharges to 303(d)-Listed Waterbodies (Turbidity, Fine Sediment, or Phosphorus)

1. Permittees which discharge to waterbodies on the 303(d) list for turbidity, fine sediment, or phosphorus shall conduct turbidity sampling at the following locations to evaluate compliance with the water quality standard for turbidity: a. Background turbidity shall be measured in the 303(d)-listed receiving water immediately upstream (upgradient) or outside the area of influence of the discharge; and b. Discharge turbidity shall be measured at the point of discharge into the 303(d) listed receiving waterbody, inside the area of influence of the discharge; or Alternatively, discharge turbidity may be measured at the point where the discharge leaves the construction site, rather than in the receiving waterbody.

2. Based on sampling, if the discharge turbidity exceeds the water quality standard for turbidity (more than 5 NTU over background turbidity when the background turbidity is 50 NTU or less, or more than a 10% increase in turbidity when the background turbidity is more than 50 NTU), all future discharges shall comply with a numeric effluent limit which is equal to the water quality standard for turbidity.

3. If a future discharge exceeds the water quality standard for turbidity, the Permittee shall:

a. Review the SWPPP for compliance with Condition S9 and make appropriate revisions within 7 days of the discharge that exceeded the standard;

b. Fully implement and maintain appropriate source control and/or treatment BMPs as soon as possible, but within 10 days of the discharge that exceeded the standard;

c. Document BMP implementation and maintenance in the site log book; d. Notify the appropriate Ecology Regional Office by phone within 24 hours of analysis;

e. Continue to sample daily until discharge turbidity meets the water quality standard for turbidity.

C. Discharges to waterbodies on the 303(d) list for High pH

1. Permittees which discharge to waterbodies on the 303(d) list for high pH shall conduct sampling at one of the following locations to evaluate compliance with the water quality standard for pH (in the range of 6.5 – 8.5): a. pH shall be measured at the point of discharge into the 303(d) listed waterbody, inside the area of influence of the discharge; or b. Alternatively, pH may be measured at the point where the discharge leaves the construction site, rather than in the receiving water.

2. Based on the sampling set forth above, if the pH exceeds the water quality standard for pH (in the range of 6.5 – 8.5), all future discharges shall comply with a numeric effluent limit which is equal to the water quality standard for pH.

3. If a future discharge exceeds the water quality standard for pH, the Permittee shall:

a. Review the SWPPP for compliance with Condition S9 and make appropriate revisions within 7 days of the discharge that exceeded the water quality standard;

b. Fully implement and maintain appropriate source control and/or treatment BMPs as soon as possible, but within 10 days of the discharge that exceeded the standards;

c. Document BMP implementation and maintenance in the site log book; d. Notify the appropriate Ecology Regional Office by phone within 24 hours of analysis; and

e. Continue to sample daily until discharge meets the water quality standard for pH (in the range of 6.5 – 8.5) or the discharge stops or is eliminated.

Parameter identified in 303(d) listing	Parameter/Units		Analytical Method	Sampling Frequency
Turbidity Fine Sediment	Phosphorus	Turbidity/NTU	SM2130 or EPA180.1	Weekly, if discharging If background is 50 NTU or less: 5 NTU over background; or If background is more than 50 NTU: 10% over background
High pH	pH/Standard Units		pH meter	Weekly, if discharging

D. Sampling and Limitations For Sites Discharging to Applicable TMDLs

1. Discharges to a waterbodies subject to an applicable Total Maximum Daily Load (TMDL) for turbidity, fine sediment, high pH, or phosphorus, shall be consistent with the assumptions and requirements of the TMDL.

a. Where an applicable TMDL sets specific waste load allocations or requirements for discharges covered by this permit, discharges shall be consistent with any specific waste load allocations or requirements established by the applicable TMDL. ii. The Permittee shall sample discharges weekly, or as otherwise specified by the TMDL, to evaluate compliance with the specific waste load allocations or requirements. iii. Analytical methods used to meet the monitoring requirements shall conform to the latest revision of the Guidelines Establishing Test Procedures for the Analysis of Pollutants contained in 40 CFR Part 136. Turbidity and pH methods need not be accredited or registered unless conducted at a laboratory which must otherwise be accredited or registered.

b. Where an applicable TMDL has established a general waste load allocation for construction stormwater discharges, but no specific requirements have been identified, compliance with Conditions S4 (Monitoring) and S9 (SWPPPs) will be assumed to be consistent with the approved TMDL.

c. Where an applicable TMDL has not specified a waste load allocation for construction stormwater discharges, but has not excluded these discharges, compliance with Conditions S4 (Monitoring) and S9 (SWPPPs) will be assumed to be consistent with the approved TMDL.

d. Where an applicable TMDL specifically precludes or prohibits discharges from construction activity, the operator is not eligible for coverage under this permit.

2. Applicable TMDL means a TMDL for turbidity, fine sediment, high pH, or phosphorus, which has been completed and approved by EPA prior to November 16, 2005, or prior to the date the operator's complete permit application is received by Ecology, whichever is later. TMDLs completed after the operator's complete permit application is received by Ecology become applicable to the Permittee only if they are imposed through an administrative order by Ecology, or through a modification of permit coverage.

Industrial General Permit (state-wide)

Facilities that discharge to a waterbody with a control plan unless this general permit is adequate to provide the level of protection required by the control plan. Excluded facilities need to obtain coverage under another NPDES permit for stormwater discharges associated with industrial activity. Control plans may be total maximum daily load (TMDL) determinations, restrictions for the protection of endangered species, ground water management plans, or other limitations that regulate or set limits on discharges to a specific waterbody or groundwater recharge area.

E. Stormwater Discharges to Impaired Waterbodies Except 303(d) Listings for Sediment and Tissue

The Permittee's discharge must not cause or contribute to an excursion of the State's water quality standards, including the State's narrative criteria for water quality. For 303(d) listings based on numeric water quality criteria, Permittees must comply with the State's water quality standard for each pollutant named as a pollutant causing a violation of water quality standards at the location named on the State's 303(d) list except for temperature which is not required and fecal coliform which is only required if there is a potential source from the industrial activity. Ecology will not require monitoring for fecal coliform if the Permittee can document that there is no potential source of fecal coliform from any of their industrial activities. A permittee's requirements to comply with this condition will be listed on the cover sheet. Ecology will maintain an electronic list of permittees subject to this permit condition. This list, titled Appendix 4, is available on Ecology's web site.

For waterbody segments listed as impaired by the State under Section 303(d) of the Clean Water Act, the applicable 303(d) list is the list which is in effect August 21, 2002, or the 303(d) list which is in effect at the date the first application for coverage is received by Ecology, whichever is later.

Permittees must be in compliance with applicable Total Maximum Daily Load (TMDL) determinations. Applicable TMDLs or TMDL determinations are TMDLs which have been completed by the issuance date of this permit, or which have been completed prior to the date that the permittees application is received by Ecology, which ever is later. A permittee's requirements to comply with this condition will be listed on their cover sheet. Ecology will maintain an electronic list of permittees subject to this permit condition. This list, titled Appendix 5, is available on Ecology's web site. Unless the first application for coverage is received after any updated 303(d) list is effective, changes associated with revised 303(d) lists completed after September 20, 2002 will only become effective if they are imposed through an administrative order issued by Ecology.

Unless the first application for coverage is received after the TMDL is completed TMDL requirements associated with TMDLs completed after the issuance date of this permit will only become effective if they are imposed through an administrative order issued by Ecology.

1. New Facilities and Significant Process Change New facilities that discharge either directly or indirectly via a stormwater conveyance system to waterbody segments listed as impaired by the State under Section 303(d) of the Clean Water Act must comply with the State's water quality standards for the named pollutant(s) at the point of discharge. Facilities with coverage under

this permit, that implement a significant process change (see S1.D.1.) must either comply with the State's water quality standards for the named pollutant(s) at the point of discharge or demonstrate no increase in loading from the entire facility as a result of the process change. All new discharges including new discharges associated with significant process changes must be in compliance with any applicable TMDL determination.

PARAMETER	***EFFLUENT LIMITATIONS: NEW FACILITIES TO IMPAIRED WATERS OR WATERS COVERED BY A TMDL***
Parameter(s) as identified for the 303(d) listed segment or if applicable, TMDL determination	*As listed on the coversheet, based on Chapter 173-201A or as identified in the TMDL or listing documentation*

2. Existing Facilities discharging to water bodies for which an applicable TMDL has been completed:

PARAMETER	***EFFLUENT LIMITATIONS: EXISTING FACILITIES TO WATERS COVERED BY A TMDL***
Parameter(s) as identified in the applicable TMDL	*As listed on the cover sheet to comply with the applicable TMDL*

Note: A current listing of permittees subject to this permit condition and the specific effluent limitations and monitoring requirements, Appendix 5, is available on Ecology's web site.

3. Existing facilities which discharge either directly or indirectly via a stormwater conveyance system to waterbody segments listed as impaired by the State under Section 303(d) of the Clean Water Act are subject to the general compliance with standards provisions in S7. Additional monitoring and benchmarks apply as described in S.4.G Note: A current listing of permittees subject to this permit condition, and the associated benchmarks and monitoring requirements, Appendix 4, is available on Ecology's web site.

G. Monitoring Requirements for Facilities Discharging to 303(d) Listed Waters or Subject to TMDL Determination Except 303(d) Listings for Sediment and Tissue

In addition to the requirements in S4.C. above, beginning January, 2005, all facilities that discharge to waterbody segments listed as impaired by the State under Section 303(d) of the Clean Water Act must conduct quarterly monitoring of authorized discharges of stormwater to surface water. Samples must be analyzed for the parameters named on the 303(d) as causing impairment of the listed waters except for temperature which is not required and fecal coliform which is only required if there is a potential source from the industrial activity. Note: A current Appendix 4 with a list of permittees subject to the monitoring requirements of this condition is available on Ecology's web site.

Discharges to a waterbody for which a TMDL has been completed must be consistent with the TMDL determination. Where the TMDL determination sets load allocations for new discharges or limits pollutant concentrations in the discharge, the Permittee must conduct quarterly monitoring for the named pollutant(s) and the monitoring must be consistent with TMDL

requirements, if any. Reporting as required by this permit begins with the first quarter of the year 2005. Note: A current Appendix 5 with a list of permittees subject to the monitoring requirements of this condition is available on Ecology's web site.

1. Permittees may suspend monitoring for a listed parameter if:

a. Eight consecutive samples fail to detect the presence of the listed parameter. Fail to detect does not apply to pH. For pH it is eight consecutive samples where the values are not outside of the water quality-based range of 6.5 to 8.5 (freshwater) or 7.0 to 8.5 (marine).

b. The Permittee can demonstrate to Ecology's satisfaction after eight or more consecutive quarterly samples that there is no reasonable potential to violate water quality standards. For the purposes of suspending monitoring required under S4.G only, no reasonable potential to violate water quality is defined as a single sample exceeding eighty percent of the benchmark, and the average of the last eight consecutive quarterly samples is less than sixty percent of the benchmark.

2. For existing permittees discharging to water bodies for which an applicable TMDL has been completed:

Parameter	***Units***	***Analytical Method***	***Minimum Sampling Frequency***
Parameter(s) as identified in the applicable TMDL. (See cover sheet)	*As Applicable (see cover sheet)*	*Appropriate EPA or Equivalent Method*	*Quarterly (See cover sheet for specifics)*

Note: A current Appendix 5 with a list of permittees subject to the monitoring requirements of this condition is available on Ecology's web site.

3. Existing permittees discharging to water bodies that discharge to waterbody segments listed as impaired by the State under Section 303(d) of the Clean Water Act:

Parameter	***Units***	***Analytical Method***	***303(d) Benchmark Value***	***Minimum Sampling Frequency***
Parameter(s) as identified for the 303(d) listed segment (See cover sheet)	*As Applicable (See cover sheet)*	*Appropriate EPA or Equivalent Method*	*Based on Chapter 173-201A (See cover sheet)*	*Quarterly (See cover sheet for specifics)*

Note: A current Appendix 4 with a list of permittees subject to the monitoring requirements of this condition is available on Ecology's web site.

H. Monitoring Requirements for Facilities Discharging to 303(d) Waterbody segments listed for Sediment

All facilities that discharge to waterbody segments listed for sediment must notify Ecology of any sediment data they may have collected. Upon request from Ecology they will submit the data.

In addition to the requirements in S4.A. above, beginning with the first quarter of the year 2005, all facilities that discharge to waterbody segments listed by the State for violations of sediment standards under Section 303(d) of the Clean Water Act must conduct quarterly monitoring of authorized discharges of stormwater to surface water for total suspended solids (TSS). Discharges that demonstrate TSS levels consistent with secondary treatment standards (30 mg/L monthly average not to exceed 45 mg/L) are considered unlikely to violate sediment quality standards. Permittees that can demonstrate consistent attainment TSS levels of secondary treatment standards may suspend monitoring for the duration of the permit term. Consistent attainment is defined as 8 consecutive quarterly samples (omitting any quarter where there is no discharge) with an average TSS of 30 mg/L and no sample exceeding 45 mg/L.

Wisconsin

Phase II MS4 general permit

1.5 Impaired Water Bodies and Total Maximum Daily Load Requirements

1.5.1 The permittee shall determine whether any part of its MS4 discharges to an impaired water body listed in accordance with section 303(d)(1) of the federal Clean Water Act, 33 USC §1313(d)(1)(C), and the implementing regulation of the US Environmental Protection Agency, 40 CFR §130.7(c)(1). Impaired waters are those that are not meeting applicable water quality standards. A list of Wisconsin impaired water bodies may be found on the Department's Internet site at: http://dnr.wi.gov/org/water/wm/wqs/303d/303d.html.

1.5.2 If the permittee's MS4 discharges to an impaired water body, the permittee shall include a written section in its storm water management program that discusses the management practices and control measures it will implement as part of its program to reduce, with the goal of eliminating, the discharge of pollutant(s) of concern that contribute to the impairment of the water body. This section of the permittee's program shall specifically identify control measures and practices that will collectively be used to try to eliminate the MS4's discharge of pollutant(s) of concern that contribute to the impairment of the water body and explain why these control measures and practices were chosen as opposed to other alternatives. Pollutant(s) of concern means a pollutant that is causing impairment of a water body.

1.5.3 After the permittee's start date of coverage under this permit, the permittee may not establish a new MS4 discharge of a pollutant of concern to an impaired water body or increase the discharge of a pollutant of concern to an impaired water body unless the new or increased discharge causes the receiving water to meet applicable water quality standards, or the Department has approved a total maximum daily load (TMDL) for the impaired water body.

1.5.4 The permittee shall determine whether its MS4 discharges to an impaired water body for which the Department has approved a TMDL. If so, the permittee shall assess whether the TMDL wasteload allocation for the MS4 is being met through the existing storm water management controls or whether additional control measures are necessary. The permittee's assessment of whether the TMDL wasteload allocation is being met shall focus on the adequacy of the permittee's storm water controls (implementation and maintenance). Approved TMDLs

are listed on the Department Internet site at:
http://dnr.wi.gov/org/water/wm/wqs/303d/index.html.

1.5.5 The storm water management program developed under section 2 of this permit shall be revised as necessary to achieve and maintain compliance with any Department approved-TMDL wasteload allocation for an impaired water to which the MS4 discharges. The redesigned storm water management programs shall be implemented as soon as possible.

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Part 1.3.C.: Eligibility, Limitations on Coverage

5. Discharging into Receiving Waters With an Approved Total Maximum Daily Load Analysis

a. You are not eligible for coverage under this permit for discharges of pollutants of concern to waters for which there is a total maximum daily load (TMDL) established or approved by EPA unless you incorporate into your SWPPP measures or controls that are consistent with the assumptions and requirements of such TMDL. To be eligible for coverage under this general permit, you must incorporate into your SWPPP any conditions applicable to your discharges necessary for consistency with the assumptions and requirements of such TMDL. If a specific wasteload allocation has been established that would apply to your discharge, you must incorporate that allocation into your SWPPP and implement necessary steps to meet that allocation.

b. In a situation where an EPA-approved or established TMDL has specified a general wasteload allocation applicable to construction storm water discharges, but no specific requirements for construction sites have been identified in the TMDL, you should consult with the State or Federal TMDL authority to confirm that adherence to a SWPPP that meets the requirements of the CGP will be consistent with the approved TMDL. Where an EPA-approved or established TMDL has not specified a wasteload allocation applicable to construction storm water discharges, but has not specifically excluded these discharges, adherence to a SWPPP that meets the requirements of the CGP will generally be assumed to be consistent with the approved TMDL. If the EPA-approved or established TMDL specifically precludes such discharges, the operator is not eligible for coverage under the CGP.

3.14 Documentation of Permit Eligibility Related to Total Maximum Daily Loads

The SWPPP must include documentation supporting a determination of permit eligibility with regard to waters that have an EPA-established or approved TMDL, including:

A. Identification of whether your discharge is identified, either specifically or generally, in an EPA-established or approved TMDL and any associated allocations, requirements, and assumptions identified for your discharge;

B. Summaries of consultation with State or Federal TMDL authorities on consistency of SWPPP conditions with the approved TMDL, and

C. Measures taken by you to ensure that your discharge of pollutants from the site is consistent with the assumptions and requirements of the EPA-established or approved TMDL, including any specific wasteload allocation that has been established that would apply to your discharge.

See section 1.3.C.5 for further information on determining permit eligibility related to TMDLs.

Federal Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity

Impaired waters include both those with established TMDLs, and those for which TMDL development has been identified as necessary, but for which one has not yet been established. For a more detailed definition see Appendix A.

1.4.4.1 Discharge to an Impaired Water with an Established TMDL. If a wasteload allocation (WLA) has been established that applies to your discharge, you must develop the SWPPP accordingly (Part 2.1.3.2), and implement all necessary controls to meet that allocation. You must verify that your discharge complies with the WLA through the appropriate discharge monitoring (Part 3.2.4.2). Failure to comply with a relevant WLA is a violation of this permit.

If you have properly complied with the requirements of Part 2.1.3.2 and find that the applicable TMDL does not specify a wasteload allocation or other requirements either individually or categorically for your discharge (including disallowing such discharge), compliance with this permit will be deemed adequate to meet the requirements of the TMDL.

1.4.4.2 Discharge to an Impaired Water without an Established TMDL. If a TMDL has not been established that applies to your discharge you must comply with the requirements of this permit and any additional conditions stipulated by the Secretary (Part 2.1.3.2). If you have properly complied with all such requirements then compliance with this permit will be deemed adequate to meet the requirements for discharging to an impaired water. You are also subject to the monitoring requirement of Part 3.2.4.1. Failure to comply with applicable conditions is a violation of this permit.

3.2.4.1 Discharges to impaired waters with no applicable wasteload allocation. For discharges that are conveyed directly or indirectly to impaired waters, monitoring for the pollutant of concern must be conducted at a minimum of once each permit year throughout the term of the permit unless this permit already assigns your discharge an effluent limitation or a benchmark for the pollutant of concern. Your monitoring year begins on the day that your discharge is authorized.

This monitoring requirement is waived after one year if the pollutant of concern is not detected in an amount expected to cause and contribute to a violation of Vermont Water Quality Standards in your stormwater discharge, and you document in your SWPPP that there is no exposure of the pollutant of concern to stormwater at your site.

3.2.4.2 Discharges to impaired waters with an applicable wasteload allocation. For discharges that are conveyed directly or indirectly to waters for which a TMDL has been established with a wasteload allocation applicable to your discharge (either specifically or categorically), monitoring for the wasteload allocation pollutant of concern must be conducted, consistent with

any instructions in TMDL documentation. If the TMDL documentation does not specify specific monitoring requirements, monitoring for the pollutant of concern must be conducted at a minimum of once each permit year throughout the term of the permit, unless this permit already assigns your discharge an effluent limitation or a benchmark for the pollutant of concern, in which case you must follow the effluent limitation or benchmark monitoring schedule. Your monitoring year begins on the day your discharge is authorized. This monitoring must be conducted in addition to all other monitoring requirements prescribed in this permit. Monitoring of a pollutant of concern for which your discharge has been assigned a wasteload allocation cannot be waived unless the WLA is specified only in terms of BMPs, in which case the monitoring requirement is waived after one year if the pollutant of concern is not detected in your stormwater discharge and you document in your SWPPP that you have adopted the required BMPs.

If at any time your monitoring data exceed a relevant waste load allocation you are subject to the Corrective Action requirements of Part 3.3 and the Follow-up Monitoring and Reporting requirements of Part 3.4.

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Web Sites and Databases

American Society of Civil Engineers' (ASCE) and EPA's International Stormwater BMP Database: www.bmpdatabase.org/

Authorization Status for EPA's Stormwater Construction and Industrial Programs by State: http://cfpub.epa.gov/npdes/stormwater/authorizationstatus.cfm

Center for Watershed Protection's Stormwater Manager's Resource Center Web site: www.stormwatercenter.net/

Center for Watershed Protection's Web site on the Simple Method: www.stormwatercenter.net. Click "By Category." Information on the Simple Method is included in the *Impacts of Urbanization* category.

Conservation Technology and Information Center Web site, *Know Your Watershed: Building Local Partnerships*: www2.ctic.purdue.edu/KYW/Brochures/BuildingLocal.html

EPA's Biocriteria Web site: www.epa.gov/waterscience/biocriteria/

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EPA's eNOI system: http://cfpub.epa.gov/npdes/stormwater/enoi.cfm

EPA's Environmental Monitoring and Assessment Program (EMAP) database: www.epa.gov/emap/index.html

EPA's *Guidelines for Reviewing TMDLs Under Existing Regulations Issued in 1992*: www.epa.gov/owow/tmdl/guidance/final52002.html

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EPA's list of Regional stormwater contacts: http://cfpub.epa.gov/npdes/contacts.cfm?program_id=6&type=REGION

EPA's list of sectors of industrial activity that require permit coverage: http://cfpub.epa.gov/npdes/stormwater/swcats.cfm

EPA's list of state stormwater contacts: http://cfpub.epa.gov/npdes/contacts.cfm?program_id=6&type=STATE

EPA's NPDES Stormwater Discharges from Industrial Facilities Web site: http://cfpub.epa.gov/npdes/stormwater/indust.cfm

EPA's NPDES Stormwater Discharges from Municipal Separate Storm Sewer Systems Web site: http://cfpub.epa.gov/npdes/stormwater/munic.cfm

EPA's NPDES Stormwater Program Authorization Status: http://cfpub.epa.gov/npdes/stormwater/authorizationstatus.cfm

EPA's NPDES Stormwater program Web site: http://cfpub.epa.gov/npdes/home.cfm?program_id=6

EPA's NPDES Stormwater Discharges from Construction Activities Web site: http://cfpub.epa.gov/npdes/stormwater/const.cfm

EPA's PCS: www.epa.gov/enviro/html/pcs/index.html

EPA's Storage and Retrieval Database (STORET): www.epa.gov/storet/

EPA's TMDL and Stormwater Resources Web site: www.epa.gov/owow/tmdl/stormwater

EPA's TMDL Web site: www.epa.gov/owow/tmdl/

EPA's Urban BMP Performance Tool: http://cfpub.epa.gov/npdes/stormwater/urbanbmp/bmpeffectiveness.cfm

Google Earth: http://earth.google.com/

Multi-Resolution Land Characteristics (MRLC) Consortium's National Land Cover Database (NLCD): www.epa.gov/mrlc/

National Agriculture Imagery Program (NAIP) Aerial Photos: http://165.221.201.14/NAIP.html

University of Alabama's (Pitt, R.E., A. Maestre, and R. Morquecho) The National Stormwater Quality Database (NSQD, version 1.1): http://unix.eng.ua.edu/~rpitt/Research/ms4/mainms4.shtml

University of Massachusetts Amherst's Massachusetts Stormwater Technology Evaluation Project (MASTEP), Stormwater Technologies Clearinghouse: www.mastep.net/

University of New Hampshire Stormwater Center, Nonpoint Education for Municipal Officials (NEMO), Innovative Stormwater Management Inventory Database: www.erg.unh.edu/stormwater/index.asp

USDA's PACFISH/INFISH Biological Opinion Program: http://fsgeodata.fs.fed.us/pibo/

USGS's Earth Explorer: http://edcsns17.cr.usgs.gov/EarthExplorer/

USGS's National Water Information System Web site (NWISWeb): http://waterdata.usgs.gov/nwis

USGS's National Water-Quality Assessment (NAWQA) Program: http://water.usgs.gov/nawqa/

USGS's Land Cover Institute: http://landcover.usgs.gov/

GLOSSARY

Benchmark monitoring: The results of MSGP 2000 benchmark monitoring are primarily for the permittee's use to determine the overall effectiveness of an SWPPP in controlling the discharge of pollutants to receiving waters. Benchmark values are not viewed as effluent limitations. An exceedance of a benchmark value does not, in and of itself, constitute a violation of the MSGP. According to EPA, while exceedance of a benchmark value does not automatically indicate that violation of a water quality standard has occurred, it does signal that modifications to the SWPPP may be necessary. In addition, permitting authorities may use the exceedance of benchmark values to identify facilities that would be more appropriately covered under an individual, or alternative general permit where more specific pollution prevention controls could be required.

Best management practice (BMP): Policies or practices that prevent, reduce, or mitigate the effects of stormwater runoff. These methods can be structural (e.g., devices, ponds) or nonstructural (e.g., policies to reduce imperviousness). BMPs classified as *nonstructural* are those that rely predominantly on behavioral changes rather than construction to be effective. *Structural* BMPs are engineered or constructed to prevent or manage stormwater. BMPs are often further classified into (1) source-control BMPs to prevent pollution, (2) water quality BMPs to reduce or prevent pollutants in runoff, (3) flow-control BMPs to reduce the volume of stormwater and (4) infiltration BMPs to increase infiltration.

Combined sewer system: Combined sewer systems are sewers that are designed to collect rainwater runoff, domestic sewage, and industrial wastewater in the same pipe. Most of the time, combined sewer systems transport all their wastewater to a sewage treatment plant, where it is treated and then discharged to a waterbody. During periods of heavy rainfall or snowmelt, however, the wastewater volume in a combined sewer system can exceed the capacity of the sewer system or treatment plant. For this reason, combined sewer systems are designed to overflow occasionally and discharge excess wastewater directly to nearby streams, rivers, or other waterbodies.

Effluent limitation: Any restriction imposed on quantities, discharge rates, and concentrations of pollutants that are discharged from point sources into waters of the United States, the waters of the contiguous zone, or the ocean (40 CFR 122.2).

Flow duration curves: Calculations of limits that analyze the cumulative frequency of historic flow data over a specified period. Flow duration curve development typically uses daily average discharge rates, which are sorted from the highest value to the lowest. Using this convention, flow duration intervals are expressed as a percentage, with zero corresponding to the highest stream discharge in the record (i.e., flood conditions) and 100 to the lowest (i.e., drought conditions). Duration curve analysis identifies intervals that can be used as a general indicator of hydrologic condition (i.e., wet versus dry and to what degree). Flow duration curve intervals can be grouped into several broad categories or zones. For example, many duration curves categorize the flow intervals into the following five zones: high flows, moist conditions, mid-range flows, dry conditions, and low flows. When water quality concentrations or loads are plotted on the basis of these flow zones, the resulting graphs can provide additional insight about conditions, patterns associated with the impairment, and potential sources contributing to the problem. Duration curves add value to the TMDL process by characterizing water quality concerns in terms of flow conditions, linking these concerns to key watershed processes, prioritizing source assessment efforts, and identifying potential solutions.

General permit: An NPDES permit issued under 40 CFR 122.28 that authorizes a category of discharges under the CWA within a geographical area. A general permit is not specifically tailored for an individual discharger.

Illicit discharge: Any discharge to a municipal separate storm sewer that is not composed entirely of stormwater, except discharges pursuant to an NPDES permit and discharges resulting from fire fighting activities.

Individual permit: An NPDES permit specifically tailored for an individual discharger.

Integrated Design and Evaluation Assessment of Loadings (IDEAL; Barfield 2002) provides a spreadsheet-based technique for assessing the benefits of urban management practices on flow, sediment, nutrients, and bacteria. The model predicts watershed runoff, concentrations, and loads on the basis of the user's selection of vegetative filter strips, dry-detention ponds and wet-detention ponds. Urban areas are defined as pervious, impervious connected, and impervious unconnected areas. Flow and loads can be directed to a pond that can be either dry (no permanent pool) or wet (permanent pool). The model then calculates the pollutant removal efficiencies of the practices using empirical equations. The model predicts single storm values and converts them to average annual storm values using a statistical process. The IDEAL model is designed to help managers estimate long-term management practice pollutant removal efficiencies, and is not designed for looking at individual storms.

Load allocation (LA): The portion of a receiving water's loading capacity that is attributed either to one of its existing or future nonpoint sources of pollution or to natural background sources. LAs are best estimates of the loading, which can range from reasonably accurate estimates to gross allotments, depending on the availability of data and appropriate techniques for predicting the loading. Wherever possible, natural and nonpoint source loads should be distinguished [40 CFR 130.2(g)].

Loading capacity: The greatest amount of loading that a waterbody can receive without violating water quality standards. Loading capacity is equal to the TMDL. Loading capacities calculated using data-driven approaches are typically based on *in-stream* or *delivered loads* (i.e., in-stream flow multiplied by target and conversion factor at a location in the waterbody). Loading capacities developed using land-based modeling approaches can also be based on *source loads* (i.e., land-based loads before they are delivered to the stream).

Margin of safety (MOS): The component of a TMDL that accounts for any lack of knowledge concerning the relationship between LAs, WLAs, and water quality [CWA section 303(d)(1)(C), 40 CFR 130.7(c)(1)]. EPA's *Guidance for Water Quality-based Decisions: The TMDL Process* (1991) explains that the MOS may be implicit (i.e., incorporated into the TMDL through conservative assumptions in the analysis) or explicit (i.e., expressed in the TMDL as loadings set aside for the MOS). If the MOS is implicit, the conservative assumptions in the analysis that account for the MOS must be described. If the MOS is explicit, the loading set aside for the MOS must be identified.

Maximum extent practicable (MEP): The pollutant reduction standard applied to stormwater management programs developed to address stormwater discharges from regulated MS4s.

Measurable goals: Quantifiable objectives for assessing program and best management practice effectiveness that regulated small municipal separate storm sewer systems must develop for the six minimum control measures to comply with Phase II MS4 permit requirements.

Model for Urban Stormwater Improvement Conceptualization (MUSIC; Wong et al. 2001): Software developed by the Cooperative Research Center (CRC) for Catchment Hydrology in Australia to evaluate small- and large-scale (100-square-mile) urban stormwater systems using modeling time steps that range from 6 minutes to 24 hours. MUSIC provides an interface to help set up complex stormwater management scenarios. It allows users to view results using a range of graphical and tabular formats. The stormwater control devices evaluated by MUSIC include ponds, bioretention, infiltration buffer strips, sedimentation basins, pollutant traps, wetlands, and swales. Major techniques used to evaluate management practices including settling in ponds and decay of pollutants (first order; see www.toolkit.net.au/music).

Multi-Sector General Permit (MSGP): Authorizes the discharge of stormwater from industrial facilities, consistent with the terms of the permit, in areas of the United States where EPA manages the NPDES permit program.

Municipal separate storm sewer system (MS4): A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to state law)...including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges into waters of the United States. (ii) Designed or used for collecting or conveying stormwater; (iii) Which is not a combined sewer; and (iv) Which is not part of a publicly owned treatment works (POTW) as defined at 40 CFR 122.2.

Notice of Intent (NOI): Submitting a completed NOI constitutes notice that the entity intends to be authorized to discharge pollutants to waters of the United States from the facility or site identified in the form under a state or EPA general permit such as the Phase II MS4 General Permit, the Multi-Sector General Permit (MSGP) for industrial stormwater, or the Construction General Permit (CGP).

Permitting authority: The U.S. Environmental Protection Agency (EPA), a Regional Administrator of EPA, or an authorized representative.

PGBMP-DSS: Evaluates the effect of management practices or combinations of management practices on flow and pollutant loading. This module uses simplified, process-based algorithms to simulate management practice control of modeled flow and water-quality time series generated from runoff models such as HSPF. These simple algorithms include weir and orifice control structures; storm swale characteristics; flow and pollutant transport; flow routing and networking; infiltration and saturation; and a general loss/decay representation for a pollutant. Users have the flexibility to design retention-style or open-channel management practices; can define flow routing through a management practice or management practice network; can simulate Integrated Management Practices (IMPs) such as reduced or discontinued imperviousness through flow networking; and can compare management practice controls against a defined benchmark such as a simulated predevelopment condition. Because the underlying algorithms are based on physical processes, management practice effectiveness can be evaluated and estimated over a wide range of storm conditions, management practice designs, and flow routing configurations.

Six minimum control measures: Categories of best management practices that regulated small MS4s must address under Phase II MS4 stormwater management programs.

Storm sewershed: Land area in which all stormwater flows are conveyed to a single point, or outlet.

Stormwater management program (SWMP): The program developed and implemented by EPA to minimize the discharge of pollutants from regulated MS4s to the maximum extent practicable using BMPs.

Stormwater pollution prevention plan (SWPPP): A plan developed to minimize the discharge of pollutants from an industrial site (including construction activities) using BMPs.

Subwatershed: Smaller division of a watershed, defined by the area draining to a tributary of the main waterbody.

The Site Evaluation Tool (SET): Software developed to assess the effects of development, including sediment and nutrient loading, on a site scale. The SET provides a more robust environment for testing multiple management practices and site configurations than do simple export calculations. The tool allows definition of pre- and post-treated land use/land cover, allowing for multiple drainage areas and various combinations of practices. An important benefit of the SET is testing management practices in combination with each other, in the context of a site or small catchment. Structural and nonstructural practices can be represented, giving the user a suite of options for evaluation.

Total Maximum Daily Load (TMDL): A calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards. A TMDL is the sum of individual wasteload allocations for point sources (WLA), load allocations for nonpoint sources and natural background (LA), and must consider seasonal variation and include a margin of safety. The TMDL comes in the form of a technical document or plan. (40 CFR 130.2 and 130.7)

Urbanized area (UA): A land area comprising one or more places—central place(s)—and the adjacent densely settled surrounding area—urban fringe—that together have a residential population of at least 50,000 and an overall population density of at least 1,000 people per square mile used to identify regulated small MS4s under the Phase II MS4 Stormwater program.

Vegetative Filter Strip Model (VFSMOD; Muñoz-Carpena et al. 2003): A model that provides specialized modeling of field-scale processes associated with filter trips or buffers. It provides routing of storm runoff from an adjacent field through a vegetative filter strip and calculates outflow, infiltration, and sediment trapping efficiency. It is sensitive to characteristics of the filter including vegetation roughness or density, slope, infiltration characteristics, and the incoming runoff volume and sediment particle sizes. VFSMOD includes a series of modules Green-Ampt infiltration, kinematic wave overland flow, and sediment filtration. The model can also be used to describe transport at the edge of the field when flow and transport are mainly in the form of sheet flow and the path represents average conditions across the vegetative filter strip. VFSMOD uses a variable time step that helps to more accurately solve the overland water flow equation. The model inputs are specified on a storm basis, and the model summarizes all the information after each event to generate storm outputs.

Virginia Field Scale Wetland Model (VAFSWM; Yu, et al. 1998): A field-scale model for quantifying the pollutant removal in a wetland system. It includes a hydrologic subroutine to route flow through the treatment system; precipitation, evapotranspiration, and exchange with subsurface groundwater. The model adopted a Continuous Stirred Tank Reactor (CSTR) in series schema. VAFSWM models mechanisms of settling, diffusion, adsorption to plants and substrate, and vegetative uptake for a pollutant in dissolved and particulate forms in a two-segment (water column and substrate), two-state

(completely mixed and quiescent) reactor system by employing first-order kinetics. The governing equations for quiescent condition are identical to that of turbulent condition; however, far lower settling velocities are assumed to account for the greater percentage of finer particles during the quiescent state. VAFSWM is a relatively simple model that includes the most dominant processes in the wetland system. However, the users need to provide and calibrate the requisite kinetics parameters.

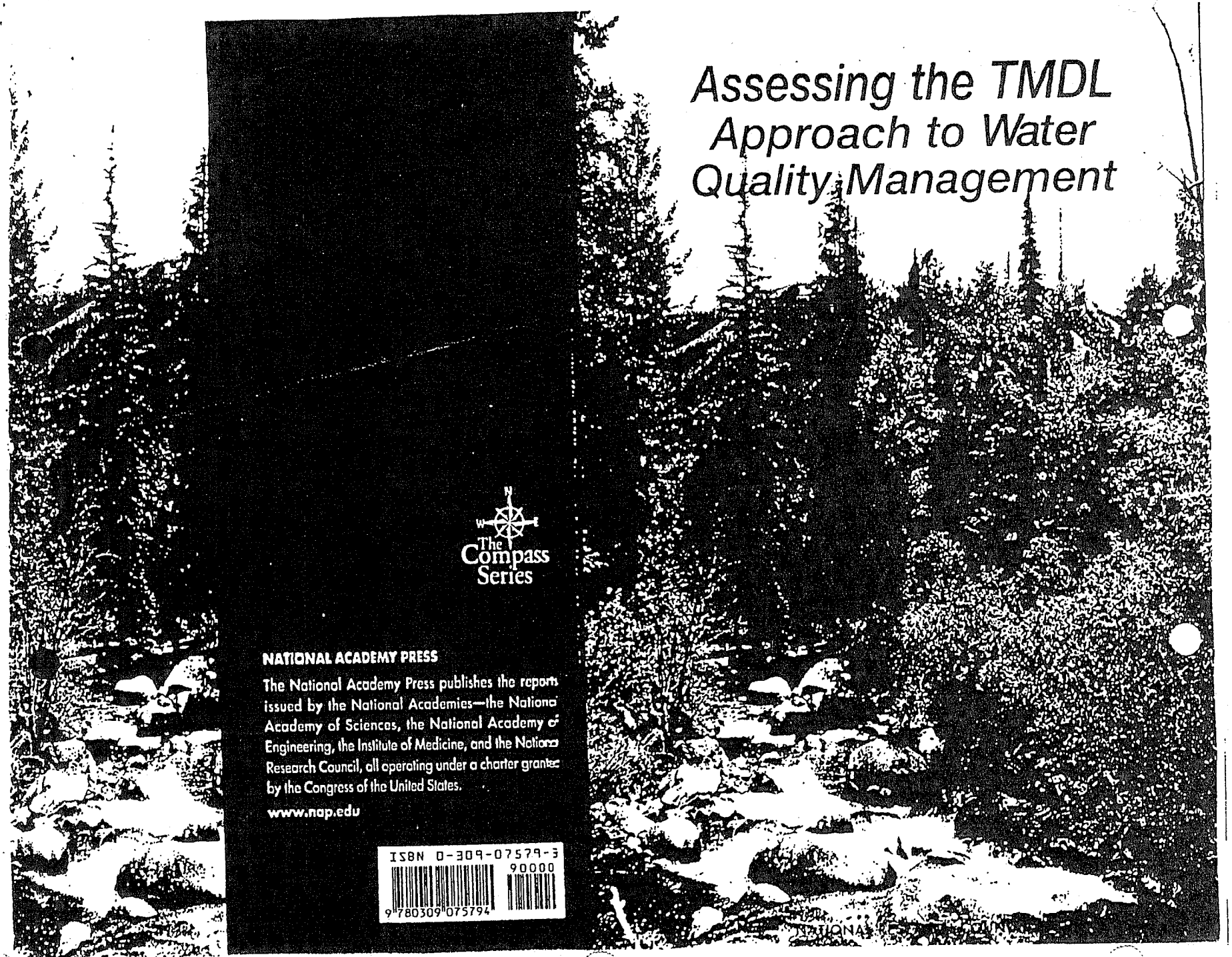
Wasteload allocation (WLA): The portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution. WLAs constitute a type of water quality-based effluent limitation (40 CFR 130.2(h)).

Water Quality Based-Effluent Limitation (WQBEL): An effluent limitation determined by selecting the most stringent of the effluent limits calculated using all applicable water quality criteria (e.g., aquatic life, human health, wildlife, translation of narrative criteria) for a specific point source to a specific receiving water for a given pollutant or on the basis of the facility's WLA from a TMDL.

Watershed: A land area that drains to a common waterway, such as a stream, lake, estuary, wetland or ultimately the ocean.

WETLAND (Lee 1999; 2002): A dynamic, compartmental model to simulate hydrologic, water quality, and biological processes and help design and evaluate wetlands. WETLAND uses the continuously stirred tank reactor prototype, and it is assumed that all incoming nutrients are completely mixed throughout the entire volume. The model can simulate both free-water surface and subsurface flow wetlands. WETLAND is modular and includes hydrologic, nitrogen, carbon, dissolved oxygen, bacteria, sediment, vegetation, and phosphorous submodels. The strength of WETLAND lies on the linked kinetics for the water quality variables and considers seasonal variation (variable user-defined parameter by season/time period). The weaknesses of this model include the completely mixed assumption, which overlooks the effect of the system shape, and the needs for extensive kinetic parameters.

EXHIBIT "4"



Assessing the TMDL Approach to Water Quality Management

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Assessing the TMDL Approach to Water Quality Management

Committee to Assess the Scientific Basis of the Total Maximum Daily Load Approach to Water Pollution Reduction

Water Science and Technology Board

Division on Earth and Life Studies

National Research Council

NATIONAL ACADEMY PRESS

Washington, D.C.

NOTICE: The project that is the subject of this report was approved by the Governing Board of the National Research Council, whose members are drawn from the councils of the National Academy of Sciences, the National Academy of Engineering, and the Institute of Medicine. The members of the committee responsible for the report were chosen for their special competencies and with regard for appropriate balance.

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COMMITTEE TO ASSESS THE SCIENTIFIC BASIS OF THE TOTAL MAXIMUM DAILY LOAD APPROACH TO WATER POLLUTION REDUCTION

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Preface

The Total Maximum Daily Load (TMDL) program, initiated in the 1972 Clean Water Act, recently emerged as a foundation for the nation's efforts to meet state water quality standards. A "TMDL" refers to the "total maximum daily load" of a pollutant that achieves compliance with a water quality standard; the "TMDL process" refers to the plan to develop and implement the TMDL. Failure to meet water quality standards is a major concern nationwide; it is estimated that about 21,000 river segments, lakes, and estuaries have been identified by states as being in violation of one or more standards. To address this problem, the U. S. Environmental Protection Agency (EPA) proposed an ambitious timetable for states to develop TMDL plans that will result in attainment of water quality standards. Given the reduction in pollutant loading from point sources such as sewage treatment plants over the last 30 years, the successful implementation of most TMDLs will require controlling nonpoint source pollution.

These two features, the ambitious timetable and nonpoint source controls, are probably the two most controversial of many issues that have been raised by those who have questioned the TMDL program. Behind and intertwined with these basic policy issues are important questions concerning the adequacy of the science in support of TMDLs.

In the last year, the TMDL program has become one of the most discussed and debated environmental programs in the nation, primarily because of the drafting of final rules for the program. These rules follow several years of intense activity, including the formation of a Federal Advisory Committee devoted to this topic. In October 2000, Congress suspended EPA's implementation of these rules until further information could be gathered on several aspects of the program. In particular, Congress requested that the National Research Council (NRC) examine the

scientific basis of the TMDL program. In recognition of the urgent need to address water quality standard violations, Congress established an aggressive schedule for completion of the study that allowed only four months from start to finish—unprecedented for most NRC studies. The eight-member committee, constituted in January 2001, immediately conducted its first meeting. This three-day meeting included two days devoted to public comments and a third day focused on internal committee discussions. The ensuing three months was a period of intense activity filled with correspondence, writing, and two additional committee meetings.

The difficult challenges facing EPA and the states in the implementation of the TMDL program were immediately apparent to the committee. Because the committee faced a congressionally mandated deadline, a number of issues important to some stakeholders were not addressed comprehensively. These include bed sediment issues, atmospheric deposition, translating narrative standards into numeric criteria, and a full review of existing water quality models. Nonetheless, the committee found that substantial improvements can be made in a number of areas to strengthen the scientific basis of the TMDL program. Also of importance, the committee identified several policy issues that are restricting the use of the best science in the TMDL program. We urge Congress, EPA, and the states to give thoughtful attention to the recommendations made throughout this report so that resources can be more efficiently used to improve water quality.

We greatly appreciate the assistance of Don Brady and Françoise Brasier of the EPA Office of Water for their assistance in initiating the study and organizing the first committee meeting. We are also grateful to those who spoke with and educated our committee, including congressional staff, EPA scientists, state representatives, and the many individuals and organizations that submitted comments to the committee.

The committee recognizes the vital role of Water Science and Technology Board (WSTB) director Stephen Parker in making this study possible. The extremely short time period for this study created an enormous challenge for NRC study director Laura Ehlers, who was able to juggle her many responsibilities to keep us focused and provide invaluable assistance in crafting the text. Finally, it is fair to say that this study owes most thanks to Leonard Shabman (Virginia Polytechnic Institute and State University) who was working in the WSTB office as a visiting scholar during the study. Dr. Shabman's insight was invaluable; he added immensely to committee discussion and correspondence, and he played a key role in drafting the text and developing the recommendations.

More formally, the report has been reviewed by individuals chosen for their diverse perspectives and technical expertise, in accordance with procedures approved by the NRC's Report Review Committee. The purpose of this independent review is to provide candid and critical comments that will assist the authors and the NRC in making the published report as sound as possible and to ensure that the report meets institutional standards for objectivity, evidence, and responsiveness to the study charge. The reviews and draft manuscripts remain confidential to protect the integrity of the deliberative process. We thank the following individuals for their participation in the review of this report: Richard Conway, consultant; Paul L. Freedman, Limno-Tech, Inc.; Donald R. F. Harleman, Massachusetts Institute of Technology (retired); Robert M. Hirsch, U.S. Geological Survey; Judith L. Meyer, University of Georgia; Larry A. Roesner, Colorado State University; Robert V. Thomann, Manhattan University (retired); and Robert C. Ward, Colorado State University.

Although the reviewers listed above have provided many constructive comments and suggestions, they were not asked to endorse the conclusions or recommendations, nor did they see the final draft of the report before its release. The review of this report was overseen by Frank H. Stillinger, Princeton University, and D. Peter Loucks, Cornell University. Appointed by the NRC, they were responsible for making certain that an independent examination of this report was carried out in accordance with institutional procedures and that all review comments were carefully considered. Responsibility for the final content of this report rests entirely with the authoring committee and the NRC.

KENNETH H. RECKHOW
Chair

Contents

Executive Summary

Over the last 30 years, water quality management in the United States has been driven by the control of point sources of pollution and the use of effluent-based water quality standards. Under this paradigm, the quality of the nation's lakes, rivers, reservoirs, groundwater, and coastal waters has generally improved as wastewater treatment plants and industrial dischargers (point sources) have responded to regulations promulgated under authority of the 1972 Clean Water Act. These regulations have required dischargers to comply with effluent-based standards for criteria pollutants, as specified in National Pollutant Discharge Elimination System (NPDES) permits issued by the states and approved by the U.S. Environmental Protection Agency (EPA). Although successful, the NPDES program has not achieved the nation's water quality goals of "fishable and swimmable" waters largely because discharges from other unregulated nonpoint sources of pollution have not been as successfully controlled. Today, pollutants such as nutrients and sediment, which are often associated with nonpoint sources and were not considered criteria pollutants in the Clean Water Act, are jeopardizing water quality, as are habitat destruction, changes in flow regimes, and introduction of exotic species. This array of challenges has shifted the focus of water quality management from effluent-based to ambient-based water quality standards.

This is the context in which EPA is obligated to implement the Total Maximum Daily Load (TMDL) program, the objective of which is attainment of ambient water quality standards through the control of both point and nonpoint sources of pollution. Although the TMDL program originated from Section 303d of the Clean Water Act, it was largely overlooked during the 1970s and 1980s as states focused on bringing point sources of pollution into compliance with NPDES permits. Citizen lawsuits during the 1980s forced EPA to develop guidance for the TMDL program, which is now considered to be pivotal in securing the

nation's water quality goals. Under TMDL regulations promulgated in 1992, EPA requires states to list waters that are not meeting water quality criteria set for specific designated uses. For each impaired water, the state must identify the amount by which point and nonpoint sources of pollution must be reduced in order for the waterbody to meet its stated water quality standards. Meeting these requirements, many of which have been imposed by court order or consent decree, has become the most pressing and significant regulatory water quality challenge for the states since passage of the Clean Water Act.

Given the most recent lists of impaired waters submitted to EPA, there are about 21,000 polluted river segments, lakes, and estuaries making up over 300,000 river and shore miles and 5 million lake acres. The number of TMDLs required for these impaired waters is greater than 40,000. Under the 1992 EPA guidance or the terms of lawsuit settlements, most states are required to meet an 8- to 13-year deadline for completion of TMDLs. Budget requirements for the program are staggering as well, with most states claiming that they do not have the personnel and financial resources necessary to assess the condition of their waters, to list waters on 303d, and to develop TMDLs. A March 2000 report of the General Accounting Office (GAO) highlighted the pervasive lack of data at the state level available to set water quality standards, to determine what waters are impaired, and to develop TMDLs.

Subsequent to the GAO report and following issuance by EPA of updated TMDL regulations, Congress requested that the National Research Council (NRC) assess the *scientific basis* of the TMDL program, including:

- the information required to identify sources of pollutant loadings and their respective contributions to water quality impairment,
- the information required to allocate reductions in pollutant loadings among sources,
- whether such information is available for use by the states and whether such information, if available, is reliable, and
- if such information is not available or is not reliable, what methodologies should be used to obtain such information.

Of concern to the nation's lawmakers was the paucity of data and information available to the states to comply with program requirements and meet water quality standards. Indeed, as the TMDL program proceeds, the best available science, especially with regard to nonpoint sources of

pollution, will be needed for regulatory and nonregulatory actions to be equitable and effective. Report recommendations are targeted (1) at those issues where science can and should make a significant contribution and (2) at barriers (regulatory and otherwise) to the use of science in the TMDL program. Chapters 2, 3, and 4 discuss the information required to set water quality standards, to list waters as impaired, and to develop TMDLs (including the identification of pollution sources), while Chapter 5 discusses the role of science in allocating pollutant loading among sources. Chapters 3 and 4 go into considerable detail about the monitoring, modeling, and statistical analysis methods needed to collect data and convert it to information, and to assess and reduce uncertainty.

This report represents the consensus opinion of the eight-memb NRC committee assembled to complete this task. The committee met three times during a three-month period and heard the testimony of over 40 interested organizations and stakeholder groups. The NRC committee feels that the data and science have progressed sufficiently over the past 35 years to support the nation's return to ambient-based water quality management. Given reasonable expectations for data availability and the inevitable limits on our conceptual understanding of complex systems, statements about the science behind water quality management must be made with acknowledgment of uncertainties. The committee has concluded that there are creative ways to accommodate this uncertainty while moving forward in addressing the nation's water quality challenges. These broad conclusions are elaborated upon below.

TMDL PROGRAM GOALS

The TMDL program should focus first and foremost on improving the condition of waterbodies as measured by attainment of designated uses. Work on meeting the strict time demands within the budget constraints cited by most states has focused on administrative outcomes as measures of success for the TMDL program. However, the success of the nation's premier water quality program should not be measured by the number of TMDL plans completed and approved, nor by the number of NPDES permits issued or cost share dollars spent. Success is achieved when the condition of a waterbody supports its designated use. Adequate monitoring and assessment must be used to improve the listing of impaired waterbodies and to characterize the effectiveness of the actions taken to meet the designated use.

The program should encompass all stressors, both pollutants and pollution, that determine the condition of the waterbody[1]. Proposed regulations may limit the applicability of the program to only those water quality problems caused by chemical and physical pollutants. Given their demonstrated effectiveness, activities that can overcome the effects of "pollution" and bring about waterbody restoration—such as habitat restoration and channel modification—should not be excluded from consideration during TMDL plan implementation.

Scientific uncertainty is a reality within all water quality programs, including the TMDL program, that cannot be entirely eliminated. The states and EPA should move forward with decision-making and implementation of the TMDL program in the face of this uncertainty while making substantial efforts to reduce uncertainty. Securing designated uses is limited not only by a focus on administrative rather than water quality outcomes in the TMDL process, but also by unreasonable expectations for predictive certainty among regulators, affected sources, and stakeholders.

CHANGES TO THE TMDL PROCESS

This report focuses on how scientific data and information should be used within the TMDL program. Science plays a crucial role in the standards-setting process, in the decision to add waters to the 303d list, in the development of the TMDL plan, and in the allocation of pollutant loads among various sources (although its importance relative to the role of policy decisions varies). The committee finds that although the state of the science is sufficient to develop TMDLs to meet ambient water quality goals in many situations, programmatic issues substantially hinder the use of the best available science. Thus, the following changes in the TMDL process are recommended, with an understanding that without such changes, the TMDL program will be unable to incorporate and improve upon the best available scientific information.

States should develop appropriate use designations for waterbodies in advance of assessment and refine these use designations prior to TMDL development. Clean Water Act goals of fishable and swimmable waters are too broad to be operational as statements of designated uses. Thus, there should be greater stratification of designated

[1] This refers to the legal definitions of "pollutant" and "pollution," which are given in Box 1-1 of Chapter 1.

uses at the state level (such as primary and secondary contact recreation). The appropriate designated use may not be the use that would be realized in the water's predisturbance condition. Sufficient science and examples exist for all states to inject this level of detail into their water quality standards. To ensure that designated uses are appropriate, use attainability analysis should be considered for all waterbodies before a TMDL is developed.

EPA should approve the use of both a preliminary list and an action list instead of one 303d list. Many waters now on state 303d lists were placed there without the benefit of adequate water quality standards, data, or waterbody assessment. These potentially erroneous listings contribute to a very large backlog of TMDL segments and foster the perception of a problem that is larger than it may actually be. States should be allowed to move those waters for which there is a lack of adequate water quality standards or data and analysis from the 303d list back to a preliminary list, as shown in Figure ES-1. This would provide the assurance that listed waters are indeed legitimate and merit the resources required to complete a TMDL. If no legal mechanism exists to bring this about, one should be created by Congress. The data requirements and other criteria that should be used to differentiate the preliminary list from the action list are discussed in the report. No waterbody should remain on the preliminary list for more than one rotating basin cycle.

TMDL plans should employ adaptive implementation. As shown in Figure ES-2, adaptive implementation is a cyclical process in which TMDL plans are periodically assessed for their achievement of water quality standards including designated uses. If the implementation of the TMDL plan is not achieving attainment of the designated use, scientific data and information should be used to revise the plan. Adaptive implementation is needed to ensure that the TMDL program is not halted because of a lack of data and information, but rather progresses while better data are collected and analyzed with the intent of improving upon initial TMDL plans. Congress and EPA need to address the policy barriers that inhibit adoption of an adaptive implementation approach to the TMDL program, including the issues of future growth, the equitable distribution of cost and responsibility among sources of pollution, and EPA oversight.

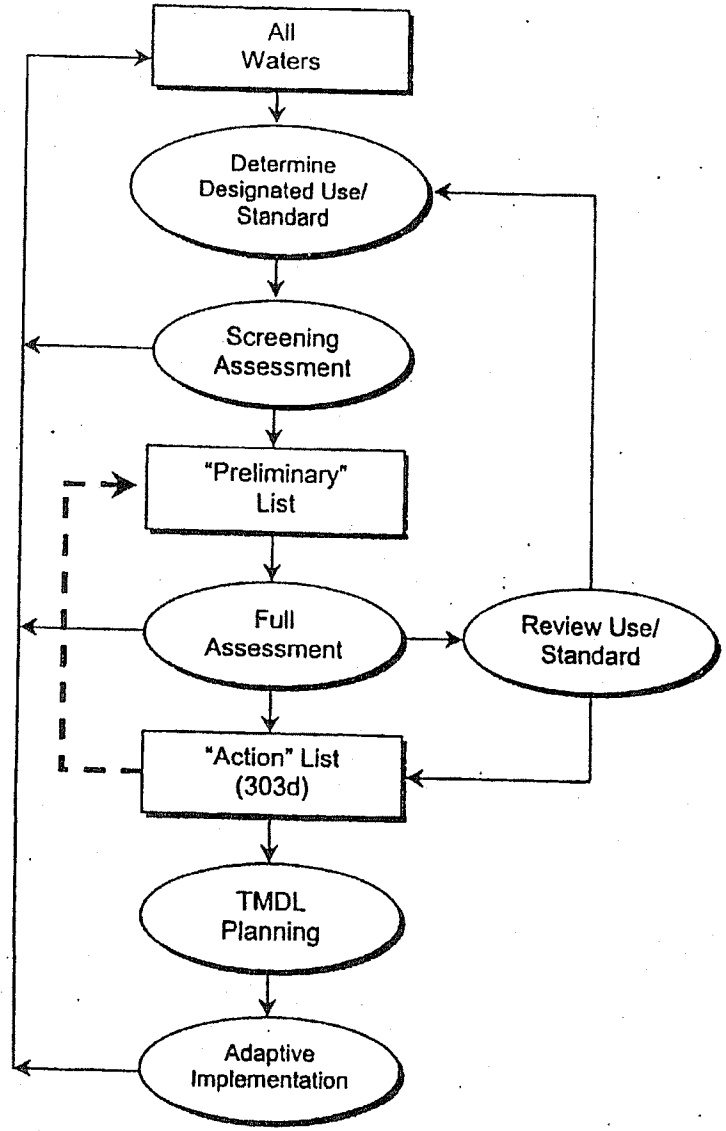

FIGURE ES-1 Framework for water quality management.

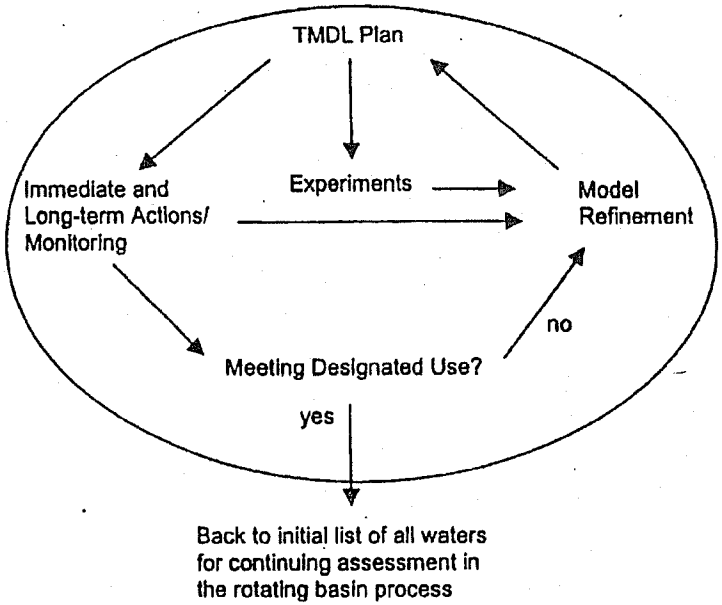

FIGURE ES-2 Adaptive implementation flowchart.

USE OF SCIENCE IN THE TMDL PROGRAM

This report suggests changes in the data used and analytical method employed that will support the revisions to the TMDL process recommended above. The following sections highlight the use of science in the TMDL program steps as illustrated in Figure ES-1. Additional recommendations about the scientific basis of the program not included in this executive summary are found throughout the report.

Water Quality Standards

The TMDL process is primarily a measurement process and as such is significantly impacted by the setting of water quality standards. Water quality standards consist of two parts: a specific desired use appropriate

to the waterbody, termed a *designated use*, and a *criterion* that can be measured to establish whether the designated use is being achieved.

The criterion used to measure whether the condition of a waterbody supports its designated use can be positioned at different points along the causal chain connecting stressors (such as land use activities) to biological responses in a waterbody. Positioning the criterion involves a trade-off between forecast error for the stressor–criterion relationship and the adequacy of the criterion as a measure (surrogate) for the designated use. Model results that forecast the impact of the stressor on the criterion are likely to be more uncertain as the criterion is positioned farther from the stressor and closer to the designated use. On the other hand, positioning the criterion closer to the stressor and farther from the designated use is likely to mean that the criterion is a poorer measure or surrogate for the designated use.

Biological criteria should be used in conjunction with physical and chemical criteria to determine whether a waterbody is meeting its designated use. In general, biological criteria are more closely related to the designated uses of waterbodies than are physical or chemical measurements. However, guiding management actions to achieve water quality goals based on biological criteria also depends on appropriate modeling efforts.

All chemical criteria and some biological criteria should be defined in terms of magnitude, frequency, and duration. The frequency component should be expressed in terms of a number of allowed excursions in a specified period. Establishing these three dimensions of the criterion is crucial for successfully developing water quality standards and subsequently TMDLs.

Water quality standards must be measurable by reasonably obtainable monitoring data. In many states, there is a fundamental discrepancy between the criteria that have been chosen to determine whether a waterbody is achieving its designated use and the frequency with which water quality data are collected. This report gives examples of this phenomenon and makes suggestions for improvement.

Waterbody Assessment and Listing

Ambient monitoring and assessment programs should form the basis for determining whether waters are placed on the preliminary list or the action list.

EPA needs to develop a uniform, consistent approach to ambient monitoring and data collection across the states. The rotating basin approach used by several states is an excellent example of a framework than can be used to conduct waterbody assessments of varying levels of complexity, for example to support 305b reports, to place impaired waters on a preliminary list or action list, and to develop TMDLs. **In that regard, EPA should set the TMDL calendar in concert with each state's rotating basin program.**

Evidence suggests that limited budgets are preventing the states from monitoring for a full suite of indicators to assess the condition of their waters and from embracing a rotating basin approach to water quality management. Currently, EPA is assessing the suff ciency of state resources to develop and implement TMDLs. Depending on the results of that assessment, Congress might consider aiding the states, for example through matching grants to improve data collection and analysis.

Evaluated data and evidence of violation of narrative standards should not be exclusively used for placement of a waterbody on the action list, but is useful for placement on the preliminary list. EPA should develop guidance to help states translate narrative standards to numeric criteria for the purposes of 303d listing and TMDL calculation and implementation.

EPA should endorse statistical approaches to defining all waters, proper monitoring design, data analysis, and impairment assessment. For chemical parameters, these statistical approaches might include the binomial hypothesis test or other methods that can be more effective than the raw score approach in making use of the data collected to determine water quality impairment. For biological parameters, the might focus on improvement of sampling designs, more careful identification of the components of biology used as indicators, and analytical procedures that explore biological data as well as integrate biological information with other relevant data.

TMDL Development

The scientific basis of the latter half of the TMDL process revolves around a wide variety of models of varying complexity that are used to relate waterbody conditions to different land uses and other factors. Models are a required element of developing TMDLs because water quality standards are probabilistic in nature. However, although models

can aid in the decision-making process, they do not eliminate the need for informed decision-making.

Uncertainty must be explicitly acknowledged both in the models selected to develop TMDLs and in the results generated by those models. Prediction uncertainty must be estimated in a rigorous way, models must be selected and rejected on the basis of a prediction error criterion, and guidance/software needs to be developed to support uncertainty analysis.

The TMDL program currently accounts for the uncertainty embedded in the modeling exercise by applying a margin of safety (MOS); EPA should end the practice of arbitrary selection of the MOS and instead require uncertainty analysis as the basis for MOS determination. Because reduction of the MOS can potentially lead to a significant reduction in TMDL implementation cost, EPA should place a high priority on selecting and developing TMDL models with minimal forecast error.

EPA should selectively target some postimplementation TMDL compliance monitoring for verification data collection so that model prediction error can be assessed. TMDL model choice is currently hampered by the fact that relatively few models have undergone thorough uncertainty analysis. Postimplementation monitoring at selected sites can yield valuable data sets to assess the ability of models to reliably forecast response.

EPA should promote the development of models that can more effectively link environmental stressors (and control actions) to biological responses. A first step will be the development of conceptual models that account for known system dynamics. Eventually, these should be strengthened with both mechanistic and empirical models, although empirical models are more likely to fill short-term needs. Such models are needed to promote the wider use of biocriteria.

Monitoring and data collection programs need to be coordinated with anticipated water quality and TMDL modeling requirements. For many parameters, there are insufficient data to have confidence in the results generated by some of the complex models used in practice today. Thus, EPA should not advocate detailed mechanistic models for TMDL development in data-poor situations. Either simpler, possibly judgmental, models should be used or, preferably, data needs should be anticipated so that these situations are avoided.

In order to carry out adaptive implementation, EPA needs to foster the use of strategies that combine monitoring and modeling and expedite TMDL development. This should involve the use of Bayesian techniques that can combine different types of information. Although the modeling framework proposed in this report calls for improvements in models, there are existing models that can be applied rapidly and effectively within an adaptive implementation framework.

FINAL THOUGHTS

Through the adoption and use of the preliminary list/action list approach, adequate monitoring and assessment approaches, sound selection of appropriate models, and adaptive implementation described in this report, the TMDL program will be capable of utilizing the best available scientific information. It is worth noting that the success of these approaches is directly related to the provision of adequate personnel and financial resources for data collection, management, and interpretation and for the development of sufficiently detailed and stratified water quality standards.

1
Introduction

THE RETURN TO AMBIENT-BASED WATER QUALITY MANAGEMENT

The Federal Water Pollution Control Act Amendments of 1972 (PL 92-500), as supplemented by the Clean Water Act (CWA) of 1977 and the Water Quality Act of 1987, are the foundation for protecting the nation's water resources. Precursors to the Water Quality Act go back to the Rivers and Harbors Appropriations Act of 1899, often referred to as the Refuse Act, and the Water Pollution Control Acts of 1948 and 1965 (Rodgers, 1994). An important impetus for earlier water quality legislation was protection of public health. Over time, this purpose was supplemented by aesthetic and recreational purposes (fishable and swimmable) and then by the goal of restoring and maintaining the "chemical, physical, and biological integrity of the Nation's waters" (Section 101a of PL 92-500).

In practice, each of these general purposes must be restated in operational and measurable terms as *ambient* water quality standards, which are established by the states and are subject to federal approval. Section 303d of the CWA makes it a responsibility of the states to assess whether ambient standards are being achieved for individual waterbodies. If ambient standards are not being met, a water quality management program to achieve those standards is anticipated.

The data and analytical requirements for determining both the causes of a failure to meet ambient standards and the solutions to such problems have challenged water quality analysts for over half a century. Prior to the 1972 Water Pollution Control Act Amendments, states were expected to identify pollutant sources that were resulting in violations of ambient water quality standards. Once the sources of the problem were carefully identified, controls on polluting activities would be put in place. However, in even modestly complex watersheds, multiple sources of pollutants made it difficult to unambiguously determine which sources were responsible for the standard violation. One source might insist that the cause of the problem was the discharge from others, or at least that its own contribution to the problem was not as significant as the contributions of others. Neither the available monitoring data nor the analytical methods available at the time allowed the states to defensibly mandate differential load reduction requirements (Houck, 1999).

The 1972 amendments recognized this analytical dilemma and shifted the focus of water quality management away from ambient standards. Instead, all dischargers of certain pollutants were expected to limit their discharges by meeting nationally established *effluent standards*. Effluent standards are specified in National Pollution Discharge Elimination System (NPDES) permits, issued by the states to certain pollutant sources and approved by the U.S. Environmental Protection Agency (EPA). Effluent standards were set at a national level based on available technologies for wastewater treatment appropriate to different industry groups (although in certain waterbodies effluent standards more stringent than the technology-based requirement have been required to meet local water quality goals). The shift to effluent standards eliminated the need to link required reductions at particular sources with the ambient condition of a waterbody. Instead, each regulated source was simply required to meet the effluent standard in its wastewater. In the intervening period since passage of PL 92-500, pollutants discharged by industry and municipal treatment plants have declined, and the ambient quality of many of the nation's lakes, rivers, reservoirs, groundwater, and coastal waters has improved.

There were consequences that followed the embracing of effluent based standards instead of ambient-based standards. First, efforts to measure and communicate water quality accomplishments were often described in terms of compliance with wastewater permit conditions rather than the condition of the waters. Second, effluent standards could only apply to so-called point sources rather than to all sources of a pollutant or other forms of pollution (Box 1-1). Pollutants from nonpoint sources (derived from diffuse and hard-to-monitor origins such as land-disturbing agricultural, silvicultural, and construction activities) largely escaped oversight. Third, attention to chemical pollutants measured in discharge water came to dominate water quality policy, and the physical and biological determinants of the ambient condition of a waterbody were less frequently considered. A *pollutant* is defined as a substance added by humans or human activities. In many cases, the condition of a

The 303d focus on ambient water quality standards has returned the nation to a water quality program that was not considered implementable 35 years ago when there was a paucity of data and analytical tools for determining causes of impairment and assigning responsibility to various sources. Determining the pollutant load from a regulated point source is a relatively straightforward task, although isolating its effect in a complex waterbody remains a technical challenge. Such technical uncertainties in relating stresses on the waterbody to impairment are compounded when nonpoint sources of pollutants and other forms of pollution are considered. Having returned the focus to ambient water quality conditions, are we better positioned today than we were years ago? Do we have more and better data and analytical methods? Do we have a better understanding of watershed events and processes responsible for water quality violations? These are the science questions facing the nation as we implement Section 303d of the Clean Water Act.

NATIONAL RESEARCH COUNCIL STUDY

Despite recent progress, the demands of the TMDL program weigh heavily on the limited resources of EPA and the states. The TMDL process requires high-quality data and sophisticated tools to analyze those data. States have reported having insufficient funds, inadequate monitoring programs, and limited staff to collect and analyze such data (GAO, 2000). According to the General Accounting Office (GAO), only six states have enough data to fully assess the condition of their waterbodies, while only 18 have enough data to place their waterbodies on the list of impaired waters (303d list). Forty states had sufficient high-quality data to determine TMDLs for waterbodies impaired primarily by point sources such as municipal sewage treatment plants, and 29 had sufficient high-quality data to implement these TMDLs. When states were asked about waterbodies impaired primarily by nonpoint sources, however, only three claimed to have sufficient data.

The GAO report outlined several critical issues for consideration by the states and EPA. Beyond questions of additional funding for data collection and staff, the states need assistance using watershed models; many reported being unclear where to go for such assistance. There appears to be no formalized process to capitalize on lessons learned, to transfer technology, and to share knowledge. Aside from the reported lack of data to comply with the TMDL regulations, when data are available, they are often not the type needed for source identification and

TMDL analyses.

Subsequent to the GAO report, Congress requested that the National Research Council (NRC) analyze on a broad scale *the scientific basis of the TMDL program*. The NRC was asked to evaluate:

- the information required to identify sources of pollutant loadings and their respective contributions to water quality impairment,
- the information required to allocate reductions in pollutant loadings among sources,
- whether such information is available for use by the states and whether such information, if available, is reliable, and
- if such information is not available or is not reliable, what methodologies should be used to obtain such information.

While the GAO report was about data, the NRC was charged to focus on *reliable information* for making decisions. In presentations made to the NRC committee, the terms "data" and "information" often were used as synonyms, but data are not the same as information. Unanalyzed data do not constitute information. Data must be interpreted for their meaning through the filter of analytical techniques, and the result of such data analysis is information that can support decision-making. Knowing what data are needed and turning those data into information constitutes, in large part, the science behind a water quality management program. The techniques for transforming data into information include statistical inference methods, simulation modeling of complex systems, and, at times, simply the application of the best professional judgment of the analyst. In all these processes there will always be some uncertainty (and thus some "unreliability") about whether the resulting information accurately characterizes the water quality problem and the effectiveness of the solutions. Because uncertainty cannot be eliminated, determining whether the information generated from data analysis is reliable is a value judgment. Individuals and groups will have different opinions about whether and how to proceed with water quality management given a certain level of uncertainty.

To organize its deliberations, the committee considered the role of science at each step of the TMDL process, from the initial defining of all waters to the implementation of actions to control pollution; the report is structured around this organization. Report recommendations are targeted (1) at those issues where science can and should make a significant contribution and (2) at barriers (regulatory and otherwise) to the use of

science in the TMDL program. Because of this broad scope, the content of the report extends beyond the confines of the charge in the bulleted items above. Chapters 2, 3, and 4 discuss the information (as defined above) required to set water quality standards, to list waters as impaired, and to develop TMDLs (including the identification of pollution sources); Chapter 5 comments on the role of science in allocating pollutant loading among sources. Because GAO (2000) already documents a widespread lack of data and information at the state level and because availability of information varies significantly from state to state, the committee did not devote substantial time to determining availability. As mentioned above, whether the information is reliable depends on the degree of uncertainty decision-makers are willing to accept when making regulatory or spending choices—a decidedly nonscientific matter. Chapters 3 and 4 describe in detail the monitoring, modeling, and statistical analysis methods needed to collect data and convert it to information, and to assess and reduce uncertainty. Chapter 5 describes an approach for making decisions in the face of uncertainty.

This report represents the culmination of three meetings over three months, including a two-day public session in which 30 presentations from a wide variety of stakeholders were made (see Appendix B). Given the information gathered during the study period and the collective experience of its members, the committee feels that the data and science have progressed sufficiently over the past 35 years to support the nation's return to ambient-based water quality management. In addition, the need for this approach is made apparent by the inability of a large percentage of the nation's water to meet water quality standards using point source controls alone. Given reasonable expectations for data availability and inevitable limits on our conceptual understanding of complex systems, statements about the science behind water quality management must be made with acknowledgment of uncertainties. Finally, the committee has concluded that there are creative ways to accommodate this uncertainty while moving forward in addressing the nation's water quality challenges. These broad conclusions are elaborated upon throughout this report.

CURRENT TMDL PROCESS AND REPORT ORGANIZATION

Section 303d requires that states identify waters that are not attaining ambient water quality standards (i.e., are impaired). (Although new rules are pending, at the request of Congress, this report focuses on the 1992

regulations that govern the current program.) States must then establish a priority ranking for such waters, taking into account the severity of the impairment and the uses to be made of such waters. For impaired waters, the states must establish TMDLs for pollutants necessary to secure applicable water quality standards. The CWA further requires that once water quality standards are attained they must be maintained.

Figure 1-1 depicts the basic steps in the TMDL process. These steps are described briefly below and are considered in greater detail throughout the report. At the beginning of the process are all waterbodies for the state and the development of water quality standards for each waterbody. Water quality standards are established outside the TMDL process and include designated uses for a waterbody and measurable water quali

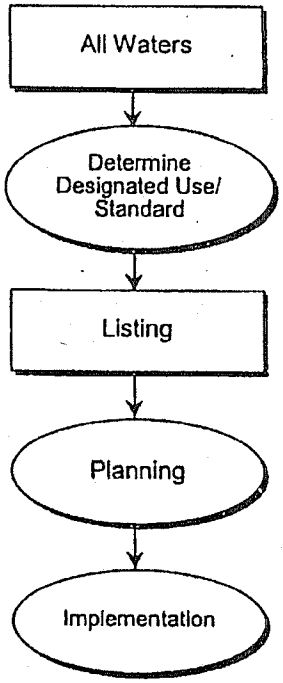

FIGURE 1-1 Conceptualized steps of the TMDL process.

criteria designed to assure that each designated use is being achieved. Because water quality standards are the foundation on which the entire TMDL program rests, more detailed discussion of standard setting is provided in Chapters 2 and 3.

The next step in the process is the listing of *impaired* waterbodies if evaluation of available data suggests that certain waterbodies are not meeting standards. According to Section 303d, all impaired waterbodies must be listed by the states or responsible agencies and submitted to EPA every two years. In addition, the states should provide priority ranking for the waterbodies on the 303d list. Following its submission, EPA must either approve or disapprove the list. Listing of a waterbody initiates a costly planning process and may lead to added costs to implement pollutant controls by point and nonpoint sources. The NRC committee heard testimony that many waterbodies have been listed based on limited or completely absent data and poorly conceived analytical techniques for data evaluation. Chapter 3 reviews the listing process and makes recommendations that will improve the reliability of the listing decision.

Once an impaired waterbody is listed, a planning step ensues. Section 303d specifies that those waters impaired by pollutants should undergo calculation of a TMDL. The term TMDL has essentially two meanings (EPA, 1991):

- The TMDL process is used for implementing state water quality standards—that is, it is a planning process that will lead to the goal of meeting the water quality standards.
- The TMDL is a numerical quantity determining the present and near future maximum load of pollutants from point and nonpoint sources as well as from background sources, to receiving waterbodies that will not violate the state water quality standards with an adequate margin of safety. The permissible load is then allocated by the state agency among point and nonpoint sources.

The calculation described above requires data collection and various forms of modeling in order to identify sources of pollution and background conditions, calculate the maximum load that will meet water quality standards with a margin of safety, and make allocations of responsibility for load reduction to point and nonpoint sources. Chapter 4 reviews modeling capability, data needs for model implementation, and the appropriate role of modeling in the TMDL planning process.

The last step in the process is implementation of the TMDL and the delisting of the waterbody. Implementation is the process of putting the

actions envisioned in the TMDL plan in place. Such actions could include limitations on point sources beyond technology-based effluent standards. Also, using best management practices for nonpoint sources, as well as addressing pollution problems, might be part of implementation, although these actions are not required by Section 303d.[1] The results of implementation actions need to be assessed before a waterbody can be removed from the list. Monitoring in this phase is necessary to measure the success (or failure) of the plan. Chapter 5 discusses postimplementation monitoring and a strategy for assuring that the best available science is used in the TMDL implementation phase. When the monitoring proves that the implementation is successful (i.e., the water quality standards are met), the waterbody can be delisted.

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[1] Whether nonpoint source controls are required as part of the TMDL program is the source of much of the debate, especially with regard to the 2000 regulations that are now on hold. Under the current (1992) regulations, 303d is a planning exercise only. Implementation must be by some other provisions of the CWA or other programs. Also, states differ in their ability to enforce use of certain best management practices.

2
Conceptual Foundations for Water Quality Management

This chapter describes the analytical and related policy challenges of implementing an ambient-focused water quality management program, of which the Total Maximum Daily Load (TMDL) program is an example[1]. The goal of an ambient water quality management program is to measure the condition of a waterbody and then determine whether that waterbody is meeting water quality standards. By definition, this process is dependent on the setting of appropriate water quality standards. Although realistic standard setting must account for watershed (hydrologic, ecological, and land use) conditions, the corresponding need to make policy decisions in setting standards must also be recognized. In addition, ambient-based water quality management requires decision-making under uncertainty because the possibility for making assessment errors is always present. Properly executed statistical procedures can identify the magnitude and direction of the possible errors so that knowledge can be incorporated into the decisions made. In addition to uncertainties inherent in measuring the attainment of water quality standards, there are uncertainties in results from models used to determine sources of pollution, to allocate pollutant loads, and to predict the effectiveness of implementation actions on attainment of a standard. As part of the information needed in the TMDL program, this uncertainty must be understood and addressed as implementation decisions are made.

AMBIENT WATER QUALITY STANDARDS

Unlike an effluent standard, an ambient water quality standard ap-

[1] Although this discussion refers to the TMDL program, it is not meant to be a description of that program.

plies to a specific spatial area—a defined waterbody—and is expected to be met over all areas of that waterbody. Thus, identifying the waterbody of interest, whether a lake, a stream segment, or areas of an estuary, is a first step in setting water quality standards. Waterbodies vary greatly in size—for example, from a small area such as a mixing zone below a point source discharge on a river to an estuary formed by a major river discharge.

Water quality standards themselves consist of two parts: a specific desired use appropriate to the waterbody, termed a *designated use*, and a *criterion* that can be measured to establish whether the designated use is being achieved. Barriers to achieving the designated use are the presence of pollutants and hydrologic and geomorphic alterations to the waterbody or watershed.

Appropriate Designated Uses

A designated use describes the goal of the water quality standard. For example, a designated use of human contact recreation should protect humans from exposure to microbial pathogens while swimming, wading, or boating. Other uses include those designed to protect humans and wildlife from consuming harmful substances in water, fish, and shellfish. Aquatic life uses are intended to promote the protection and propagation of fish, shellfish, and wildlife resources.

A designated use is stated in a written, qualitative form, but the description should be as specific as possible. Thus, more detail than "recreational support" or "aquatic life support" is needed. The general "fishable" and "swimmable" goals of the Clean Water Act constitute the beginning, rather than the end, of appropriate use designation. For example, a sufficiently detailed designated use might distinguish between beach use, primary water contact recreation, and secondary water contact recreation[2]. Similarly, rather than stating that the waterbody needs to be "fishable," the designated use would ideally describe whether the water-

[2] These uses are defined differently from state to state. In Ohio, primary contact recreation includes full body immersion activities such as swimming, canoeing, and boating. Such streams or rivers must have a depth of at least 1 meter. Secondary contact recreation includes activities such as wading, but where full body immersion is not practical because of depth limitations. The fecal bacteria criteria are less stringent for secondary contact recreation than for primary contact recreation.

body is expected to support a desired fish population (e.g., salmon, trout, or bass) and the relative invertebrate or other biological communities necessary to support that population. Although small headwater streams may have aesthetic values, they may not have the ability to support extensive recreational uses themselves (i. e., be "fishable" or "swimmable"). However, their condition may have an influence on the ability of a downstream area to achieve a particular designated use. In this case, the designated use for the smaller waterbody may be defined in terms of the achievement of the designated use of the larger downstream waterbody (as illustrated in the discussion of criteria below).

In many areas of the United States, human activities have radically altered the landscape and aquatic ecosystems, such that an appropriate designated use may not necessarily be the aquatic life condition that was present in a watershed's predisturbance condition, which may be unattainable. For example, a reproducing trout fishery in downtown Washington, D.C., may be desired, but may not be attainable because of the development history of the area or the altered hydrologic regime of the waterbody. Similarly, designating an area near the outfall of a sewage treatment plant for shellfish harvesting may be desired, but health considerations would designate it as a restricted shellfish harvest water. Furthermore, there may be a conscious decision to establish a designated use that would *not* have existed in the predisturbance condition. For example, construction of a lake for a warm water fishery is a use possible only as a result of human intervention.

Appropriate use designation for a state's waterbodies is a policy decision that can be informed by technical analysis. However, a final selection will reflect a social consensus made in consideration of the current condition of the watershed, its predisturbance condition, the advantages derived from a certain designated use, and the costs of achieving the designated use. Ideally, a statewide water quality management program should establish a detailed gradient of use designations for waterbodies. Box 2-1 describes the multiple tiers of designated uses developed for waters in Ohio.

Defining a Criterion

A water quality standard includes a criterion representing the condition of the waterbody that supports the designated use. Thus, the designated use is a description of a desired endpoint for the waterbody, and the criterion is a measurable indicator that is a surrogate for use attainment.

BOX 2-1

Appropriate Designated Uses: The Ohio Example

An approach to setting appropriately stratified or tiered designated uses for a state's waterbodies has been developed in Ohio. The state recognized early on that a stratified set of use designations for aquatic life, recreation, and water supply was needed to accurately reflect the potential quality for various waterbodies and to guide cost-effective expenditures for pollution controls and other restoration activities. In lieu of general use, more detailed designated uses were developed that reflect the potential of the aquatic ecosystem and account for the historical influence of broad-scale socioeconomic activities. Individual waterbodies are assigned the appropriate designated use based on a use attainability analysis (UAA) process that relies heavily on site-specific information about the waterbody. The information used in this process results from the systematic monitoring of waters via a rotating basin approach in which biological, chemical, and physical data are collected and analyzed. Aquatic life uses are based primarily on the biological criteria and physical habitat assessments that are calibrated with regard to the important regional and watershed-specific variables that determine the potentially sustainable aquatic assemblage. Recreational uses are designated based on the size of the waterbody, reflecting the ability of humans to use the water for swimming, boating, fishing, or wading.

The system of tiered aquatic life and recreational uses in the Ohio water quality standards was established in 1978, well before biological criteria were adopted for use (May 1990). Two newly proposed uses are now under study, one for urban streams, which would require a site-specific UAA, and one for primary headwater streams (<1 sq. mi. drainage area), which are outside of the practical resolution of the present biological criteria. (A readily accessible and detailed example of such designated uses for Ohio can be found at http://www.epa.state.oh.us.dsw/rules/3745-1.html.)

The criterion may be positioned at *any* point in the causal chain of squares shown in Figure 2-1. Criteria in squares 2 and 3 are possible measures of ambient water quality condition. Square 2 includes measures of a water quality parameter such as dissolved oxygen (DO), pH, nitrogen concentration, suspended sediment, or temperature. Criteria closer to the designated use (e.g., square 3) include measures such as the condition of the algal community (chlorophyll *a*), a comprehensive index

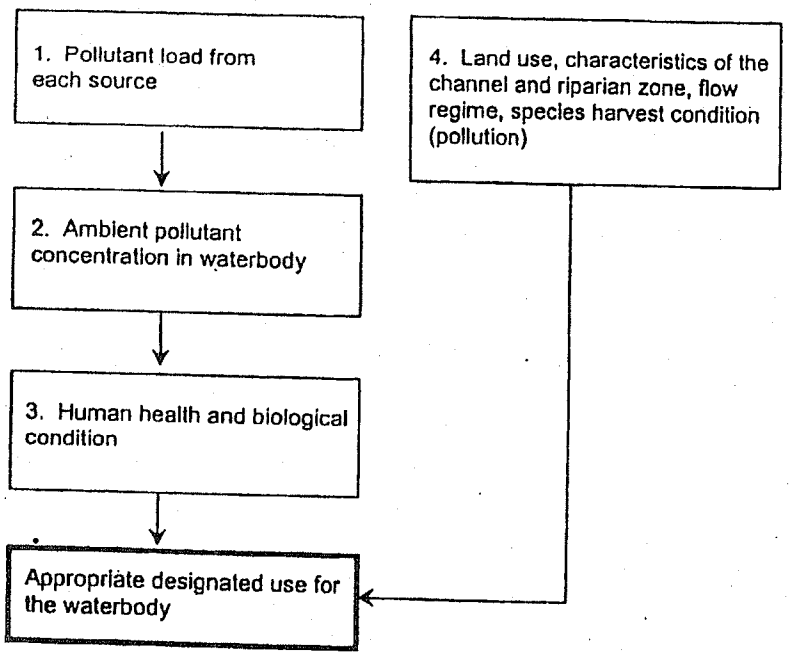

FIGURE 2-1 Types of water quality criteria and their position relative to designated uses.

measure of the biological community as a whole, or a measure of contaminant concentration in fish tissue. In square 1, where the criterion is farther from the designated use, are measures of the pollutant discharge from a treatment plant (e.g., biological oxygen demand, NH_3, pathogens, suspended sediments) or the amount of a pollutant entering the edge of a stream from runoff. A criterion at this position is referred to as an effluent standard. Finally, square 4 represents criteria that are associated with sources of pollution other than pollutants. These criteria might include measures such as flow timing and pattern (a hydrologic criterion), abundance of nonindigenous taxa, some quantification of channel modification (e.g., decrease in sinuosity), etc.

Because the designated use is stated in written and qualitative terms, the challenge is to logically relate the criterion to the designated use. Establishing this relationship is easier as the criterion moves closer to the designated use (Figure 2-1). In addition, the more precise the statement of the designated use, the more accurate the criterion will be as an indicator of that use. For example, the criterion of fecal coliform count may be used for determining if the use of water contact recreation is achieved, and the fecal count criterion may differ among waterbodies that have primary versus secondary water contact as their designated use.

Surrogate variables often are selected for use as criteria because they are easy to measure. Although the surrogate may have this appealing attribute, its usefulness can be limited if it cannot be logically related to a designated use. For example, chlorophyll *a* has been chosen as a biocriterion in some states because it is a surrogate for aesthetic conditions or the status of the larger aquatic ecosystem. In North Carolina, the ambient water quality standard of 40 µg/l for chlorophyll *a* was proposed for lakes, reservoirs, sounds, estuaries, and other slow-moving waters not designated as trout waters. However, a discussion of the appropriate designated uses for the waters of the state and how this criterion is logically related to those uses did not accompany the adoption of this criterion.

As with setting designated uses, the relationship among waterbodies and segments must be considered when determining criteria. For example, where a segment of a waterbody is designated as a mixing zone for a discharge, the criterion adopted should assure that the mixing zone use will not affect the attainment of the uses designated for the surrounding waterbody. In a similar vein, the desired condition of a small headwater stream may need to be chosen as it relates to other waterbodies in the watershed. Thus, an ambient nutrient criterion may be set in a small headwater stream to secure a designated use in a downstream estuary, even if there are no localized effects of the nutrients in the small headwater stream. Conversely, a higher fecal coliform criterion that supports only secondary contact recreation may be warranted for a waterbody with little likelihood of being a recreational resource—if the fecal load dissipates before the flow reaches an area designated for primary contact recreation.

DECISION UNCERTAINTY

Ambient-focused water quality management requires one to ask whether the designated use is being attained and, if not, the reasons for nonattainment and how the situation can be remedied. Neither of these questions, which make reference to the chosen criteria, can be answered with complete certainty. Determining use attainment requires making criterion measurements at different locations in the waterbody and at different times and comparing the measurements to the standard. Individual measurements of a single criterion constitute a sample, and statistical inference procedures use the sample data to test hypotheses about whether the actual condition in the water meets the criterion. Errors of inference are always possible in statistically valid hypothesis testing. It is possible to falsely conclude that a criterion is not being met when it is. It is also possible to conclude that a criterion is being met when in fact it is being violated. Chapter 3 includes recommendations for controlling and managing such uncertainty.

Water quality management also requires models to relate the criterion to activities that might control pollution. For example, a criterion requiring a certain DO level may be chosen to help meet the designated use of a trout fishery. Models will be required to relate a management practice, such as fertilizer control, to the DO criterion. These types of models can be broadly labeled as models that relate stressors (sources of pollutants and pollution) to responses—similar to models used in hazardous waste risk assessment and many other fields. Stressors include human activities likely to cause impairment, such as the presence of impervious surfaces in a watershed, cultivation of fields too close to the stream, over-irrigation of crops with resulting polluted return flows, the discharge of domestic and industrial effluent into waterbodies, dams and other channelization, introduction of nonindigenous taxa, and overharvesting of fishes. Indirect effects of humans include the clearing of natural vegetation in uplands that alters the rates of delivery of water and sediment to stream channels.

A careful review of direct and indirect effects of human activities suggests five major classes of environmental stressors: alterations in physical habitat, modifications in the seasonal flow of water, changes in the food base of the system, changes in interactions within the stream biota, and release of contaminants (conventional pollutants) (Karr, 1990; NRC, 1992). The presence of one of more of these in a landscape may be responsible for changes in a waterbody that result in failure to attain a designated use. Ideally, models designed to protect or restore water

quality to ensure attainment of designated uses should include all five classes of pollution. The broad-based approach implicit in these five features is more likely to solve water resource problems because it requires a more integrative diagnosis of the cause of degradation (NRC, 1992).

Models that relate stressors to responses can be of varying levels of complexity (Chapter 4). Sometimes, models are simple conceptual depictions of the relationships among important variables and indicators of those variables, such as the statement "human activities in a watershed affect water quality including the condition of the river biota." More complicated models can be used to make predictions about the assimilative capacity of a waterbody, the movement of a pollutant from various point and nonpoint sources through a watershed, or the effectiveness of certain best management practices.

There are two significant sources of uncertainty in any water quality management program: epistemic and aleatory uncertainty (Stewart, 2000). Epistemic uncertainty—incomplete knowledge or lack of sufficient data to estimate probabilities—is a by-product of our reliance on models that relate sources of pollution to human health and biological responses. We are limited by incomplete conceptual understanding of the systems under study, by models that are necessarily simplified representations of the complexity of the natural and socioeconomic systems, as well as by limited data for testing hypotheses and/or simulating the systems. Limited conceptual understanding leads to parameter uncertainty. For example, at present there is scientific uncertainty about the parameters that can represent the fate and transfer of pollutants through watersheds and waterbodies. It is plausible to argue that more complete data and more work on model development can reduce epistemic uncertainty. Thus, a goal of water quality management should be to increase the availability of data, improve its reliability, and advance our modeling capabilities. Indeed, Chapter 4 describes ways in which improved data and modeling can narrow the band of uncertainty and ways to characterize the remaining uncertainty.

However, complete certainty in support of water quality management decisions cannot be achieved because of aleatory uncertainty—the inherent variability of natural processes. Aleatory uncertainty arises in systems characterized by randomness. For example, if a pair of dice is thrown, the outcome can be predicted to be between 2 and 12, although the exact outcome cannot be predicted. The example of the dice toss represents the best-case scenario of a system characterized by random-

ness, because it is a closed system in which we have complete confidence that the result will be between 2 and 12. Not only are waterbodies, watersheds, and their inhabitants characterized by randomness, but they are also open systems in which we cannot know in advance what the boundaries of possible biological outcomes will be.

Thus, uncertainty is a reality that water quality management must recognize and strive to assess and reduce when possible. It derives from the need to use models that relate actions taken to alter the stressors so that the desired criterion and designated use of a waterbody will be secured. Although the purpose of water quality modeling will change depending on how close to the designated use the criterion is positioned, the importance of modeling and the inevitable uncertainties of model results remain.

CONCLUSIONS AND RECOMMENDATIONS

The two major themes of this chapter represent areas in water quality management where science and public policy intersect. First, with respect to the setting of water quality standards, in order for designated uses to reflect the range of scientific information and social desires for water quality, there must be substantial stratification and refinement of designated uses. Information from science can and must be part of this process; however, there are unavoidable social and economic decisions to be made about the desired state for each waterbody. Second, although science should be one cornerstone of the program, an unwarranted search for scientific certainty is detrimental to the water quality management needs of the nation. Recognition of uncertainty and creative ways to make decisions under such uncertainty should be built into water quality management policy, as discussed in the remaining chapters.

1. Assigning tiered designated uses is an essential step in setting water quality standards. Clean Water Act goals (e.g., "fishable," "swimmable") are too broad to be operational as statements of designated use. However, designated uses will still remain narrative statements.

2. Once designated uses are defined, the criterion chosen to measure use attainment should be logically linked to the designated use. The criterion can be positioned anywhere along the causal chain connecting stressors (sources of pollution) to biological response. As the designated uses are expressed with more detail and are appropriately tiered, the criterion can be more readily related to the use. However, criteria should not be adopted based solely on the ease of measurement in making this link.

3. Expectations for the contribution of "science" to water quality management need to be tempered by an understanding that uncertainty cannot be eliminated. In both the assessment and planning processes, even the best available tools cannot banish uncertainty stemming from the variability of natural systems.

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3
Waterbody Assessment: Listing and Delisting

On July 27, 2000, the Assistant Administrator for Water at the U. S. Environmental Protection Agency (EPA) testified before a U.S. House committee that over 20,000 waterbodies across the United States were not meeting water quality standards according to Section 303d lists. Because of legal, time, and resource pressures placed upon the states and EPA, there is considerable uncertainty about whether many of the waters on the 1998 303d lists are truly impaired. In many instances, waters previously presented in a state's 305b report[1] or evaluated under the 319 Program[2] were carried over to the state's 303d list without *any* supporting water quality data [e.g., see Iowa Senate File 2371, Sections 7–12 (Credible Data Legislation)]. Meanwhile, some waters that may be impaired have yet to be identified and listed.

The creation of an accurate and workable list of impaired waters is dependent on the first three steps of the Total Maximum Daily Load (TMDL) process, as depicted in Figure 1-1. States need to decide what waters should be assessed in the first place, how to create water quality standards for those waters, and then how to determine exceedance of

[1] The Clean Water Act Section 305b report—the National Water Quality Inventory Report—is the primary vehicle for informing Congress and the public about general water quality conditions in the United States. This document characterizes water quality, identifies widespread water quality problems of national significance, and describes various programs implemented to restore and protect our waters (http://www.epa.gov/305b/).

[2] Under the Clean Water Act Section 319 Nonpoint Source Management Program, States, Territories, and Indian Tribes receive grant money to support a wide variety of activities, including technical assistance, financial assistance, education, training, technology transfer, demonstration projects, and monitoring to assess the success of specific nonpoint source implementation projects (http://www.epa.gov/owow/nps/cwact.html).

those standards. Ideally, all these activities are encompassed and coordinated under the umbrella of a holistic ambient water quality monitoring program, described in the next section. However, given resource constraints, the approaches currently used in most states to list impaired waters fall short of this ideal. In recognition of these constraints, the committee recommends changes to the TMDL program that would make the lists more accurate over the short and long terms. In addition, this chapter includes discussion on identifying waters to be assessed, defining measurable criteria for water quality standards, and interpreting monitoring results for making the listing (and delisting) decision.

ADEQUATE AMBIENT MONITORING AND ASSESSMENT

The demands of an ambient-focused water quality management program, such as the TMDL program, require changing current approaches toward monitoring and assessment and subsequent decision-making. In many states, administrative performance measures (e.g., number of TMDLs developed, number of permits issued, and timeliness of actions) have been the principal measure of program effectiveness (Box 3-1). Such administrative measures are important, but reliance on such measures diverts attention and resources away from environmental indicators of waterbody condition—the principal measures of effectiveness and success. Rather, information for decision-making should be based on carefully collected and interpreted monitoring data (Karr and Dudley, 1981; Yoder, 1997; Yoder and Rankin, 1998). The committee recognizes that state ambient monitoring programs have multiple objectives beyond the TMDL program (e.g., 305b reports, trends and loads assessmen and other legal requirements), which are not addressed in this report. .. is suggested that to make efficient use of resources, states evaluate the extent to which their present ambient monitoring programs are coordinated and collectively satisfy their objectives.

Ambient monitoring and assessment begins with the assignment of appropriate designated uses for waterbodies and measurable water quality criteria that can be used to determine use attainment (EPA, 1995a). The criteria, which may include biological, chemical, and physical measures, define the types of data to be collected and assessed. In response to the Government Performance and Results Act, the EPA Office of Water has developed national indicators for surface waters (EPA, 1995a) and a conceptual framework for using environmental information in decision-making (EPA, 1995b). EPA's Office of Research and Development

BOX 3-1

Ohio's Experience with TMDLs

In 1998, Ohio EPA's Division of Surface Water (DSW) made recommendations for a process to develop TMDLs (Ohio EPA, 1999). The impetus for developing a comprehensive TMDL strategy was (1) the national attention brought about by lawsuits filed by environmental organizations and (2) the potential for the TMDL process to address all relevant sources of pollution to a waterbody. Prior to realizing the importance of this issue, state water quality management efforts were focusing on point sources and National Pollution Discharge Elimination System (NPDES) permitting, although since 1996, the leading cause of waterbody impairment has been shown to be nonpoint pollution and habitat degradation (Ohio EPA, 2000, Section 305b report).

An agreement was reached between Ohio EPA and U.S. EPA Region V on a 15-year schedule for TMDL development. Ohio's 1998 303d list shows 881 of 5,000 waterbody segments as being impaired or threatened in 276 of the 826 watershed areas. Thus, completing TMDLs for all the currently listed segments by 2013 (in keeping with the 15-year schedule) will require an average of 18 watershed TMDLs per year, assuming that no new watersheds are added to future revisions of the 303d lists. It is understood that this latter assumption is unrealistic because a good portion of the state's 5,000 waterbody segments has yet to be assessed, and it is a near certainty that additional waterbodies and watersheds will be listed. Ohio recognizes that the technical and management processes required to implement TMDLs will need to go beyond the purview of the past emphasis on NPDES permits and point sources.

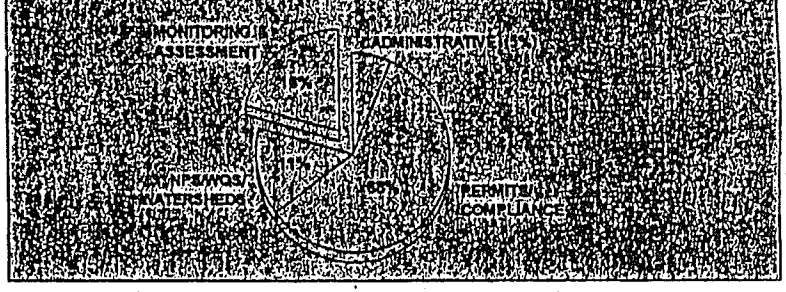
At present, Ohio estimates it has sufficient resources available to develop only half of the TMDLs needed each year to produce the quality of product needed to meet various program expectations and expectations of stakeholders. Using 1998 as a baseline (approximately 16 percent of the DSW's resources were dedicated to efforts that directly support TMDL development (see pie chart below). Without increases in funding, the resources will need to be diverted from other programs, or the pace of TMDL development will slow to the point where the 15-year schedule will need to be significantly extended. Diverting resources from other programs is highly unlikely in that each program faces unique challenges, including reduction and elimination of NPDES permit backlogs,

(continues)

BOX 3-1 Continued

and the growing need for new source permits, both of which place new burdens on the largest share of DSW resources. Devoting additional resources to TMDL development and implementation would require significant changes in water quality management emphasis on the national level, which seems unlikely given historical inertia and the emphasis placed on permitting programs by EPA and the states. Better coordination between competing programs as well as additional resources are needed to resolve the present TMDL resource shortfall dilemma. Refocusing water quality management more on environmental results (as opposed to administrative accomplishments alone) should provide a framework to better unify the emphasis and direction of competing programs.

Ohio EPA Surface Water Program Resources Allocation by Functional Category (1998)



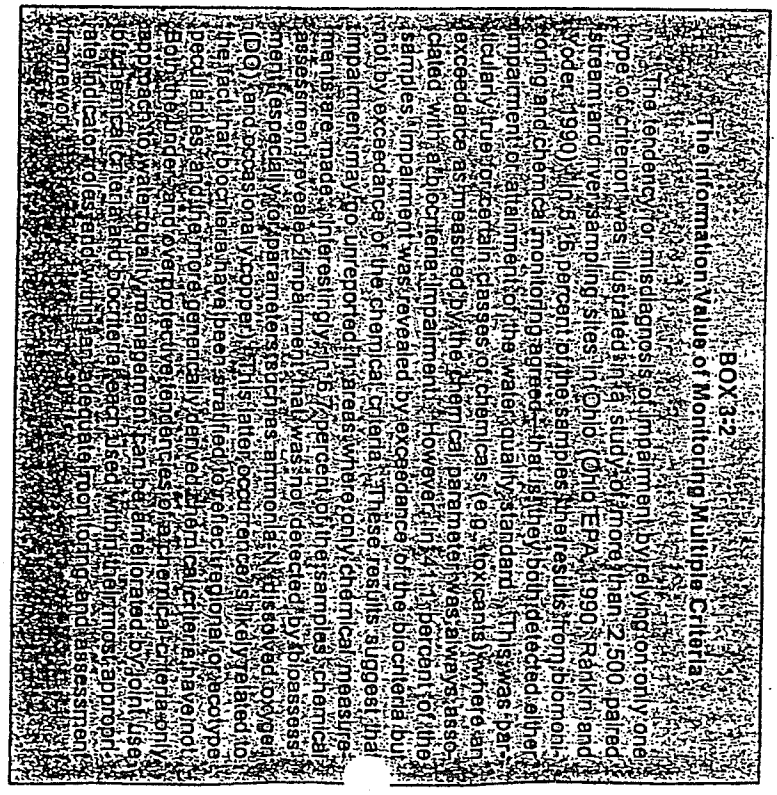
recently published technical guidelines for the evaluation of ecological indicators (Jackson et al., 2000). One set of measurable parameters, termed indicators in Table 3-1, is offered for illustration. The core indicators include baseline biological, chemical, and physical parameters that comprise the basic attributes of aquatic ecosystems supplemented by specific chemical, physical, and bacteriological parameters from water, sediment, and tissue media, depending on the applicable designated use(s) and watershed-specific issues. Additional indicators not listed (e.g., biochemical markers and whole toxicity testing) may be appropriate as the situation dictates.

TABLE 3-1. Core and Supplemental Indicators and Parameters that Comprise the Elements of an Adequate State Monitoring and Assessment Framework (after ITFM, 1992, and Yoder, 1997).

Core Indicators				
Fish	**Macroinvertebrates**	**Periphyton**	**Physical habitat**	**Chemical quality**
• Use at least two assemblages			• Channel morphology • Flow regime • Substrate quality • Riparian condition	• pH • Temperature • Conductivity • DO

For Specific Designated Uses, add the following:				
	Aquatic Life	*Recreation*	*Water Supply*	*Human/Wildlife Consumption*
Base list	• Ionic strength • Nutrients, sediment	• Fecal bacteria • Ionic strength	• Fecal bacteria • Ionic strength • Nutrients, sediment	• Metals (in tissues) • Organics (in tissues)
Supplemental list	• Metals • Organics • Toxics	• Other pathogens • Organics	• Metals • Organics • Other pathogens	

More than one criterion may be necessary to determine attainment of a designated use, and each criterion will have strengths and limitations. In many instances of impairment—for example when riparian and aquatic habitats have been modified or flow regimes altered—biological parameters are better than chemical parameters at reflecting the condition of the aquatic ecosystem (Box 3-2). This is because biological assemblages respond to and integrate all relevant chemical, physical, and biological factors in the environment whether of natural or anthropogenic origin. On the other hand, relying only on biological assessments would not allow precise enough determination of associated causes and sources of impairments to satisfy water quality management needs including TMDL development. Over the long term, a full complement of measured parameters must be the goal for water quality monitoring, assessing



chemistry and biology in a complementary manner and in their most appropriate indicator role (Karr, 1991; ITFM 1992, 1993, 1995; Yoder, 1997; Yoder and Rankin, 1998).

At present, monitoring resources available to some states often do not allow for collecting and interpreting data for such a comprehensive suite of parameters. Indeed, ITFM (1995) reported that of the funding allocated by state and federal agencies to water quality management activities, only 0.2 percent was devoted to ambient monitoring. GAO (2000) has also noted the lack of adequate state budgets for the collection of meaningful data and for data interpretation. In response to these resource shortfalls, the tendency has been to use only a single indicator of ambient conditions and often just a limited number of observations. Although some parameters can be monitored at lower costs than others, all monitoring can be costly (Yoder and Rankin, 1995).

After standards development, a second requirement is adoption of a strategic and consistent approach to sampling and assessment given limited data collection resources. Currently, the states use vastly different frameworks for monitoring and assessment, the net result of which is widely divergent estimates of the extent of impaired waters and of the proportion of waters that are fully assessed. This casts a great deal of uncertainty not only about what water quality problems are the most important, but also about the accuracy and completeness of their delineation. Errors in these estimates often become evident in the poor credibility of 303d listings.

A monitoring strategy that has promise in this limited-resource environment is the rotating basin approach, commonly referred to as a five-year basin approach (ITFM, 1995). As discussed in Box 3-3 for Florida, this approach is already followed by a number of states, at least in how ambient monitoring is accomplished[3]. As part of a rotating basin approach, individual waters are assessed at differing levels of complexity each year, allowing for localized problems to be identified and solutions to be developed. For example, whether an individual assessment consists of an initial screening to identify gross impairment or a full assessment with more serious consequences will depend on how the information is to be used (for 305b reports, 303d listing, or other water quality programs). Over time, different waterbodies are intensively studied as part of the rotation. Data collected can be used to support a number of differ-

[3] In some states, the rotating basin approach is considered to be part of the ambient monitoring program, while in others, it is a separate program. This report assumes the former throughout.

BOX 3-3

The Rotating Basin Program in Florida

Settlement of a lawsuit brought by Earthjustice against EPA for its failure to enforce timely actions to accomplish TMDL-related activities in Florida occurred in June 1999. Under the consent decree's (CD) terms of the Agreement, nearly 2,000 TMDLs in 711 waterbody segments are to be completed by the year 2011. Florida Department of Environmental Protection (FDEP) has been named the lead agency to produce and adopt TMDLs, but its efforts must be coordinated with numerous other state and local agencies. In addition, the state has created opportunities for public participation throughout the TMDL generation and adoption process.

To address the challenge of conducting the TMDL program and to better allocate its available resources, on July 1, 2000, Florida moved to the rotating basin approach for watershed management. Florida's rotating basin approach has five phases (see below), with each phase taking about one year to complete. Further, FDEP has divided the state into 30 areas based on 8-digit hydrologic unit codes (HUCs) such that six areas representing approximately one-fifth of Florida will be in the TMDL adoption phase in any one year, to meet the timelines ordered in the CD for Florida. FDEP must limit the time, effort, and resources it can commit in any one phase on waterbody.

Because EPA has largely focused on addressing point source discharges through the NPDES permitting program, state and local governments have, in many cases, taken the lead in dealing with nonpoint source issues usually outside of the TMDL program. These programs often provide a flexible option to the time and budget constraints mentioned above. Florida believes that if local stakeholders are willing to initiate substantive programs that can fully or even partially accomplish the goals of the TMDL program at an expedited pace, then state and federal agencies should be able to support these actions rather than delay or resist them. For example, in southwest Florida, a group of concerned stakeholders combined to form a Nitrogen Consortium (NC) to reduce inputs of nitrogen from all sources to the waters of Tampa Bay. Working together with the Tampa Bay Estuary Program and the FDEP, the NC developed a plan designed to hold the line against future increases of nitrogen (Tampa Bay National Estuary Program, 1996). Specific load reduction efforts have been identified within the basin that allow for anticipated growth to occur without resulting in a net increase in nitrogen loads to Tampa Bay. As would be anticipated under the conditions of a more formal TMDL, periodic reviews are made of the underlying assumptions and models used to further refine the nitrogen loads and associated goals. Although FDEP has not formally adopted a TMDL for Tampa Bay, EPA has approved these goals in a limited, nonregulatory TMDL for Tampa Bay.

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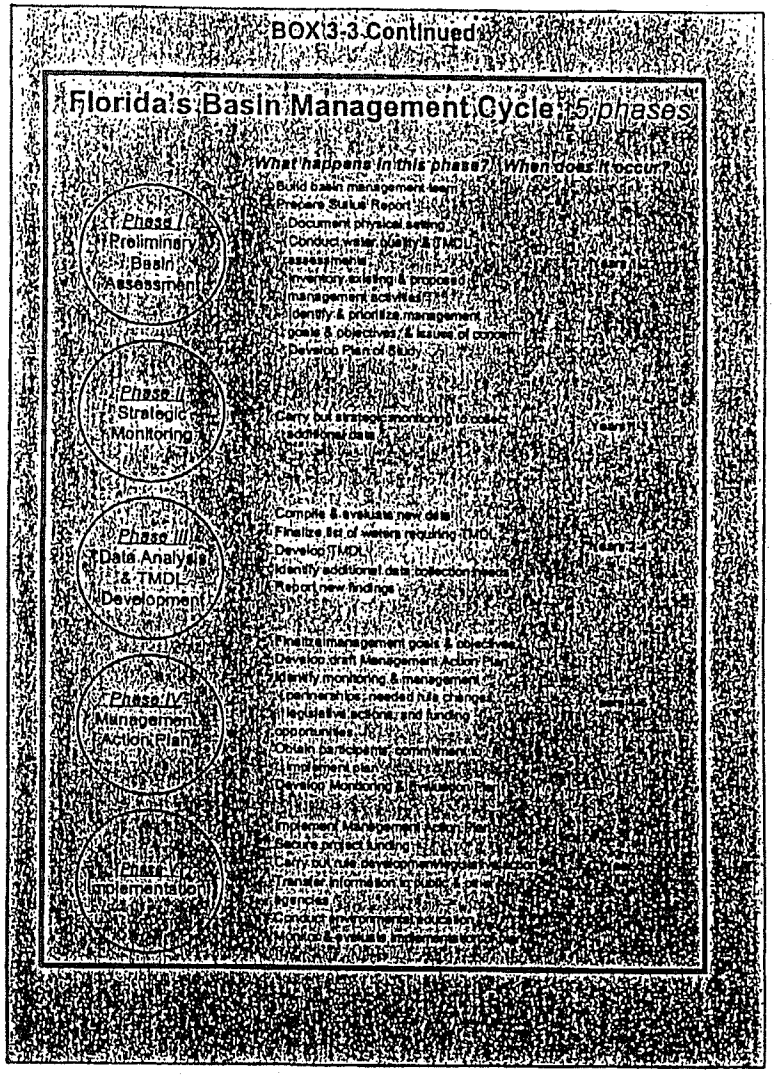
BOX 3-3 Continued



ent reporting and planning requirements, including a finding of attainment of water quality standards, a determination of impairment, or possible delisting if the waterbody is found not to be impaired. Initial assessments that identify a waterbody as *potentially* impaired could be followed up by more thorough assessment. The rotating basin approach is an iterative process where the end result is both continual improvement of water quality management tools and policies and the ability to respond to emerging issues.

Conclusions and Recommendations

1. To achieve the goal of ambient-based water quality management, monitoring and reporting must mature to focus on the condition of the environment as the principal measure of success rather than on administrative measures.

2. Biological parameters should be used in conjunction with physical and chemical parameters to assess the condition of waterbodies. The use of both biological and chemical parameters is needed because they provide different and complementary types of information about the source and extent of impairment.

3. Evidence suggests that limited budgets are preventing the states from monitoring for a full suite of indicators to assess the condition of their waters and from embracing a rotating basin approach to water quality management. Currently, EPA is assessing the sufficiency of state resources to develop and implement TMDLs. Depending on the results of that assessment, Congress might consider aiding the states, for example through matching grants to improve data collection and analysis. EPA would be instructed to develop guidelines for such a program, if needed, making eligibility contingent on an approved statewide monitoring and assessment strategy.

4. To allow states to better target limited monitoring budgets, EPA should set the TMDL calendar in concert with each state's rotating basin program. The rotating basin approach used by several states is an excellent example of a rigorous approach to ambient monitoring and data collection that can be used to conduct waterbody assessments of varying levels of complexity. For example, this approach can be used to create 305b reports, to list impaired waters, and to develop

TMDLs. Once TMDLs are developed, the rotating basin approach could allow state and local governments to issue permits and implement management programs based on the TMDLs in a coordinated manner.

DEFINING ALL WATERS

As shown in Figure 1-1, the TMDL process begins with identification of all waters for which achievement of water quality standards is to be assessed. The proposed regulations for the TMDL program (EPA, 1999a) define a waterbody as "a geographically defined portion of navigable waters, waters of the contiguous zone, and ocean waters under the jurisdiction of the United States, including segments of rivers, streams, lakes, wetlands, coastal waters and ocean waters." The proposed regulations also require that states identify the geographic location of listed waterbodies using a "nationally recognized georeferencing system as agreed to by [the state] and the EPA." States identify listed waterbodies using a variety of georeferencing systems, including stream segments in the EPA's reach file system and watersheds in the U. S. Geological Survey (USGS) system of hydrologic drainage basins. The use of such systems for documenting the location of listed waters is convenient and provides a degree of national standardization to the TMDL process. However, the selection of a georeferencing system and a spatial scale for defining the totality of state waters is a more complicated issue (aside from the policy issue of national standardization).

The EPA's definition of waterbody implies that all state waters should be considered in the search for impaired waters and provides no guidance on a practical upstream limit or spatial scale to observe in that search. In theory, the hierarchy of tributaries in a watershed extends upstream indefinitely. In practice, however, the choice of a lower limit on spatial scale or stream size has a very large influence on the total number of stream miles and small lakes that are included in the definition of state waters and thus require some form of assessment. For example, RF1, the original version of the EPA's national reach file system (DeWald et al., 1985) contained approximately 65,000 stream reaches totaling approximately 1 million km of stream channels. Now considered by EPA to be inadequate for describing the nation's river and stream system, RF1 has been replaced by the National Hydrography Dataset (NHD) containing more than 3 million reaches totaling nearly 10 million km of channels. Moreover, a number of states have petitioned the EPA to add still lower-

order reaches (i.e., smaller streams) to the NHD in order to document the location of waters assessed by local interest groups. Because of local pressure and the lack of a regulatory lower limit on the size of streams and lakes to be considered, and because Geographic Information Systems (GIS) can document the existence and location of very small streams and lakes, the task of accurately and comprehensively assessing state waters has become formidable. At the current NHD scale, states contain an average of about 70,000 stream reaches (>100,000 km), and given recent trends, that average is rising.

This raises the question of how large the region of validity (the spatial area over which the data apply) is for data gathered at a single monitoring station. The question is conceptually troubling to begin with because the variability of water quality is large and continuous in both space and time. In practice, moreover, the de facto valid region for monitoring stations is extremely large. Given the spatially detailed treatment of rivers and streams in the NHD, however, most states would need to gather data from more than a thousand stations per year to maintain an average "monitoring ratio" of 100 km per station (assuming the NHD approximately describes state waters). This distance is clearly greater than the valid region for monitoring stations on most surface waters, especially because most of the channel length in state waters is contributed by relatively small streams (e.g., drainage areas less than 100 km^2) where water quality conditions may vary greatly over short distances. Thus, a substantial portion of state waters would appear to be located outside of the valid monitoring region for a state monitoring program of 1,000 stations. These waters are either left out of the decision process and are deemed not impaired by default, or they are included in the decision process with higher error rates.

One solution to this problem is to avoid the concept of a valid region for individual monitoring stations entirely and replace it with an approach in which monitoring data are used to develop statistical models of water quality in state waters. Water quality conditions at monitoring sites can be statistically related to known factors that cause impairment in watersheds (the size and location of stressors, for example), thus enabling estimates of water quality conditions at other unmonitored locations. As discussed later, this approach may also benefit the listing process.

Conclusions and Recommendations

1. Each state should develop a catalogue of waterbodies based on the National Hydrography Dataset for the purposes of defining state waters and designing sampling and assessment programs.

2. States should attempt to move away from the concept of a region of validity of individual monitoring stations and instead consider a statistical modeling approach to assessing the condition of waters. This approach would combine monitoring data with estimates of water quality based on statistical models.

DESIRABLE CRITERIA

This section considers the desired features of chemical and biological criteria as surrogates for designated use. For listing and delisting purposes, numeric and measurable criteria should be logically derived from the designated use statement. Ideally, appropriate designated uses and associated criteria are assigned to each waterbody prior to an assessment. Realistically, the cost and effort involved in categorizing every waterbody in advance of an assessment may be prohibitive, and many states' programs for setting appropriate use designation are continuing efforts. As is noted in Chapter 5, it is advisable to conduct a site-specific review to refine the standard once a waterbody is listed and before a TMDL is initiated.

One desired feature of a criterion is that it must be measurable with available monitoring methods. Unfortunately, federal guidelines for water quality assessment (EPA, 1994) do not assure this feature. In many cases there may be a discrepancy between the formulation of water quality criteria and the frequency with which water quality data are gathered.

A criterion may not be a single number, but instead may be represented as a frequency, duration, and magnitude. In the context of a pollutant, the *magnitude* refers to how much of the pollutant can be allowed in the water while still achieving the designated use. The magnitude can be chosen to protect against either acute or chronic effects of a pollutant. *Duration* refers to the period of time over which measurements of the pollutant are considered. Pollutant levels may be averaged over some number of hours or days to determine that amount of the pollutant that can be present without a loss of the designated use. The allowable *frequency* at which the criterion can be violated (called an excursion) without a loss of the designated use also must be considered. Thus, in the case of a trout fishery, the criterion might specify a minimum DO (or maximum chlorophyll *a*) that can be realized for a period of time and the number of times this number can be violated before there is demonstrable harm to the designated use. It should be noted that these numbers are pollutant-specific, and they might vary with season depending on, for example, fish life-stage.

Establishing these three dimensions of the criterion is crucial for successfully developing water quality standards[4]. Currently, there are many cases where there are insufficient data collected in one or more of these three dimensions to evaluate attainment of water quality criteria. In addition, some standards are virtually impossible to comply with, especially when the frequency of allowable excursions is zero (called "no-exceedance" standards). Box 3-4 provides three examples of criteria that are either unmeasurable given current monitoring protocols or are exceedingly difficult to meet and thus constitute an intractable problem for the TMDL program. Careful consideration of the three dimensions of the criterion is also critical to the development of appropriate TMDLs. In the law, the letter "d" in TMDL refers to a *daily* load, which has been interpreted literally in some legal cases. However, for many pollutants, the load determined over a longer time period (e.g., a season or year) is more relevant to securing the designated use. Examples of this are nutrient and sediment criteria, where the duration component of the criterion is generally not stated as "daily."

A second desirable feature is that the measured criterion must be logically derived from the qualitative statement of the designated use. The closer the criterion is in the causal chain (Figure 2-1), the easier it is make that connection. This has led to increased interest in biocriteria, particularly numeric measures of fish, benthic invertebrate, algal, and diatom assemblages. Recommendations to adopt biocriteria are often made because biocriteria integrate the effects of multiple stressors over time and space, thus minimizing the need for a large number of samples (Karr, 2000). A second advantage of using biocriteria is that, unlike chemical criteria, they are designed to be specific to certain regions and

[4] Specifying the magnitude, frequency, and duration is critical for chemical criteria, but may not be necessary for certain biological criteria. For example, the fecal coliform standard is best defined with all three components. On the other hand, many biocriteria such as IBI are well defined by a single number because they integrate biological, chemical, and physical effects over time.

BOX 3-4
Problems Associated with Standards

Unmeasurable Standards

By definition, the TMDL program requires that waterbodies meet water quality criteria daily. Interpreted by some as meaning that the sampling frequency must be daily. This requires that a complete time series of grab or composite samples be taken daily without an interruption over a period of a minimum of three years. As one might expect, such time series of water quality data are almost never available for waterbody assessment (with the exception of the continuous monitoring for a few parameters such as DO or temperature). Samples are generally taken monthly for common parameters and annually or less often for some toxic chemicals that require expensive laboratory analytical methodology. Sediment sampling is done infrequently, perhaps once in a period of several years.

Similarly, the frequency/duration components of water quality criteria for contact recreation are generally infeasible to measure. Many states use fecal coliform count as an indicator for the contact recreation. The standards are usually compared to the geometric mean of at least five samples taken over 30 days. This standard is not defined in terms of allowable excursions, thus there is no frequency component. With the exception of waterbodies used for water supply, monitoring data are rarely collected often enough to comply with such a standard.

No-Exceedance Standard

Many states require that a numeric standard be maintained at all times, which implies that all monitored values of a parameter should be below the criterion. Such a limitation is a statistical impossibility because there is always a chance—albeit remote—that a water parameter may reach a high but statistically possible value exceeding an established standard. In addition, this requirement would seem to provide an incentive to sample as little as possible in order to reduce the chance of collecting a sample that is in exceedance. For example, it is possible that if nine samples are taken over a period of three years, none of the samples would, by chance, result in an excursion. If 100 samples are taken in the same period, a few (e.g., five or less) may exceed the standard. The former sampling scheme would indicate that the waterbody is in compliance while the other would not. Stream concentrations represent statistical time series for which only infinitesimally large values of a standard would have a 100 percent statistical probability of not ever being exceeded.

Flow Restriction Standards

To make no-exceedance standards easier to comply with, EPA (1992) and many states incorporated a flow restriction into the standards. Thus, the standards must be maintained at all times except at flows that are less than some specified low flow value (one example is given below). Unfortunately, except for the "harmonic mean flow" (Singh and Ramamurthy, 1991), none of the critical low flows specified by EPA allow consideration of wet weather discharges (Novotny, 1999). Thus, under wet weather flows, the "no-exceedance" criterion is in effect. This ignores the fact that measured water quality parameters are naturally variable.

One type of flow restriction standard is based on hydrologically based design flows. To protect against acute effects, such water quality criteria must be met at all times except during the lowest daily flow occurring once every 10 years (referred to as 1Q10). To protect against chronic effects, water quality criteria must be met at all times except during the lowest flow occurring once every 10 years, averaged over a 7-consecutive-day period (7Q10). This approach assumes that concentrations of pollutants of concern are decreasing as flows increase—likely to be true for the case of a continuous, year-round discharge from a point source, but not for nonpoint sources. It should be noted that these design flows have interim status and were not recommended for general application with water quality standards. In addition, hydrologically based design flows vary from state to state.

conditions. For example, a swamp forest will typically violate DO criteria, and waterbodies in mountain areas with heavy metal-bearing rocks may violate heavy metal criteria. Biocriteria that are regionally relevant would not show those conditions as violations.

Fecal coliform counts and algal community parameters such as chlorophyll *a* are a type of biocriteria, but they are not comprehensive measures of waterbody condition. To make bioassessment more comprehensive, index systems have been developed that focus on characteristics of the biota expected in the particular region where the waterbody is located, including desired fish species and other associated organisms (Box 3-5).

The scientific community measures integrity by describing the biological condition of waterbodies that, as much as possible, have not been altered by human activity. When "pristine" or "minimally disturbed"

BOX 3-5
Index Systems for Bioassessment

During the past two decades, biological assessment—evaluating human-caused biotic changes apart from those occurring naturally—has become a part of water managers' tool kits. Two major approaches to ambient biological monitoring are used—the river invertebrate prediction and classification system (RIVPACS) and the multimetric index of biological integrity (IBI). Although their conceptual and analytical details differ, both RIVPACS and IBI (1) focus on biological endpoints to define waterbody condition, (2) use a concept of a regionally relevant reference condition as a benchmark, (3) organize sites into classes with similar environmental characteristics, (4) assess change and degradation caused by human effects, (5) require standardized sampling, laboratory, and analytical methods, (6) score sites numerically to reflect site condition, (7) define "bands," or condition classes, representing waterbody condition, and (8) furnish needed information for diverse management decisions (Karr and Chu, 2000).

RIVPACS was developed in England (Wright et al., 1989, 1997) with clones available for use in Australia (Norris et al., 1995) and Maine (Davies and Tsomides, 1997). IBI was developed in the United States (Karr, 1981; Karr et al., 1986; Karr and Chu, 1999) with clones applied by state and federal agencies (Ohio EPA, 1988; Davis et al., 1996; Barbour et al., 1999) and abroad (Hughes and Oberdorff, 1999). Although applications of RIVPACS are historically limited to invertebrates in rivers, IBI applications have been developed for diverse taxonomic groups and waterbody types. For example, a multimetric index (RFA, reservoir fish assessment index) has been developed as a component of Tennessee Valley Authority's (TVA) "vital signs" monitoring program to assess fishery management success in reservoirs (Jennings et al., 1995; McDonough and Hickman, 1999).

As a general example, consider a minimally disturbed Pacific Northwest stream supporting self-sustaining populations of salmon and associated assemblages of invertebrates. With urban development, salmon decline and cutthroat trout become relatively more abundant and certain invertebrate taxa (e.g., stoneflies) are reduced or eliminated. Tiered beneficial uses could, in this case, differentiate between streams supporting salmon vs. cutthroat trout using an index based on the invertebrate assemblages as the biocriterion. Recent work in these streams suggests that a benthic index of biological integrity (B-IBI) of about 35 is a minimum required to maintain a healthy salmon population (Karr, 1998). If the IBI drops below 20 because of continued development, even the cutthroat trout will eventually disappear.

sites are used to define integrity, any site that has been altered by human actions must, by definition, lack integrity because its biota have changed in response to the actions of humans. For obvious reasons, reservoirs, farm ponds, and other waterbodies "created" by human actions cannot be assessed using this standard.

However, it does *not* follow that a waterbody lacking integrity is impaired or that restoring biological integrity is either possible or desirable. A waterbody that is described as lacking "biological integrity" should not be assumed to be in a less-than-desirable state. Rather, when a bioassessment finds that a waterbody diverges from integrity, there must be a social decision about whether that divergence is acceptable. In short,

> "The biota of minimally disturbed sites—those with integrity—provides a benchmark, a standard by which others are measured. The protection of that standard, or something very close to it, is likely to be the goal—the end toward which effort is directed—in relatively few places (e.g., national parks). The modern reality is that we are not able to preserve all areas in this benchmark condition. For example, restoring salmon to every Pacific Northwest stream is not realistic, yet a restoration goal that includes viable populations of cutthroat trout may be reasonable even in many urban or suburban streams. (Karr, 2000)

Measures of biological condition (e.g., IBI) inform society of the status of a water resource. But society must decide the desired designated use and then determine what level on the index numeric scale is, with reasonable certainty, likely to protect that designated use.

Recently, the EPA Office of Water has convened a working group of states and other supporting institutions to better define the gradient o biological condition from pristine to highly degraded and link this with operational measures such as numeric biocriteria in a manner that will ensure consistency across state programs. This is referred to as tiered aquatic life uses and is expressed as a biocondition axis. Examples of this framework already exist in Maine, Ohio, and Vermont. The expectation is that as states develop a more detailed system of tiered designated uses, they will also develop measurable biocriteria logically tied to those uses.

Conclusions and Recommendations

1. **All chemical criteria and some biological criteria should be defined in terms of magnitude, frequency, and duration.** Each of these three components is pollutant-specific and may vary with season. The frequency component should be expressed in terms of a number of allowed excursions in a specified period (return period) and not in terms of the low flow or an absolute "never to be exceeded" limit. The requirement of "no exceedances" for many water quality criteria is not achievable given natural variability alone, much less with the variability associated with discharges from point and nonpoint sources.

2. **Water quality standards must be measurable by reasonably obtainable monitoring data.** In many states, there is a fundamental discrepancy between the criteria that have been chosen to determine whether a waterbody is achieving its designated use and the frequency with which water quality data are collected.

3. **Biological criteria should be used in conjunction with physical and chemical criteria to determine whether a waterbody is meeting its designated use.** Biocriteria are more closely related to designated uses, they can be defined and measured, and they integrate the effects of multiple stressors over time and space.

LISTING AND DELISTING IN A DATA-LIMITED ENVIRONMENT

As discussed at the beginning of this chapter, states are confronted with lengthy lists of impaired waters requiring TMDLs, many of which were judged against inadequate standards or were not fully assessed as part of a comprehensive ambient monitoring program. This section proposes a mechanism for managing the large number of waters requiring attention by dividing the listing process into multiple smaller steps, as shown in Figure 3-1.

Figure 3-1 illustrates a framework for water quality management that is more detailed than the conceptualized steps of the TMDL process shown in Figure 1-1. Figure 3-1 begins with the identification of all waters to be assessed and the determination of appropriate water quality standards as in the current TMDL program. Following this, however,

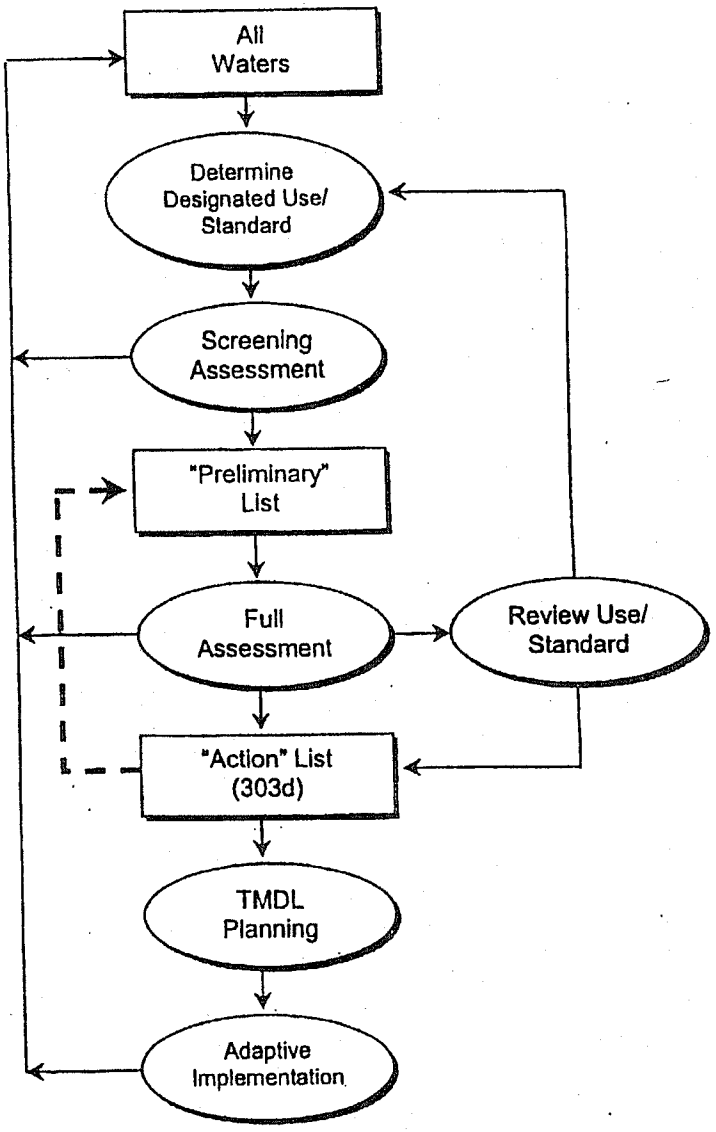


FIGURE 3-1 Framework for water quality management.

waters to be assessed would next go through an initial screening assessment. This involves comparing available, and often limited, data on water quality conditions with the existing applicable water quality criterion. If based on this initial screening assessment the waterbody is considered a candidate for impairment, it is advanced to the "preliminary" list for further consideration. It should be relatively easy to get on the preliminary list, the consequences of which include additional and immediate investigation to determine the nature and reality of a suspected problem. The term "preliminary" indicates that waterbodies on this list may later be placed on an action list, but they may also be declared unimpaired. Such a preliminary list has been suggested or employed in some states (e.g., Florida).

Those waterbodies placed on the preliminary list are the object of a more complete assessment that would involve additional monitoring and appropriate analysis of new data to reduce the uncertainty about their condition. If the decision from the full assessment is that the waterbody is impaired, then it moves to an "action list." One might think of the action list as the state's impaired waters (303d) list. The word "impaired" is a term of art. Impaired waters under Section 303d are analogous to "water quality limited segment(s)," as defined in the federal regulations (40 CFR Section 130.2(j)). The consequence of advancing to the action list is that additional resources are needed to either review and update the existing standard or complete a TMDL. (For those cases in which the existing criteria are not appropriate to a waterbody, Figure 3-1 allows for review of the water quality standard for that waterbody. The process for completing that review—use attainability analysis—is discussed in Chapter 5.)

The organizing concept in this idealized process is continuous and concurrent progress toward improved monitoring and listing decisions. The process moves forward from a position of limited information to more information; from uncertainty to more certainty; and from inaction to progressively larger and possibly more costly actions. Were EPA to endorse the idealized process represented in Figure 3-1, the listing process would be improved. For example, at the current time, there are thousands of waters on state 303d lists that were not placed there using adequate data or information. Waters in this category should be moved back to the preliminary list, represented by the dashed return arrow in Figure 3-1, to allow a more complete evaluation to be made.

Creating the Preliminary List

Determining whether there should be some minimum threshold of data available when evaluating waterbodies for attainment of water quality standards is an issue of great concern to states. On the one hand, many call for using only the "best science" in making listing decisions, while others fear many impaired waters will not be identified in the wait for additional data. The existence of a preliminary list addresses these concerns by focusing attention on waters suspected to be impaired without imposing on stakeholders and the agencies the consequences of TMDL development, until additional information is developed and evaluated.

In many cases, biological and limited water quality surveys along with an inventory of existing sources of pollution may provide adequate information for a screening assessment of the waterbody. Evaluated data are also an important source of information for determining if a waterbody should be placed on the preliminary list. Evaluated data may take many forms (e.g., data older than a certain age, beach closures based on fixed rainfall thresholds, visual observations, and statistical inferences from small data sets) and have been described differently from state to state[5]. In contrast, monitored data are viewed as being more comprehensive, typically using data less than five years old, and may include a wide array of direct measurements of water quality, including physical, chemical, or biological measures. Use of evaluated data has been controversial in water quality assessments under the Clean Water Act. The controversy would be lessened if the use of evaluated data were limited to placing waters on the preliminary list.

The quality of the data used to list waterbodies as impaired is frequently a concern. Beyond the normal data entry, sampling, and laboratory errors, states must determine the reliability of the data coming from a wide range of sources (especially for evaluated data). Some states have responded to this uncertainty by strictly limiting the data used in making assessments to those collected by the state's lead environmental agency or some other select group of data providers (such as USGS). To over-

[5] Evaluated data and/or information provides an indirect appraisal of water quality through such sources as information on historical adjacent land uses, aquatic and riparian health and habitat, location of sources, results from predictive modeling using input variables, and some surveys of fish and wildlife. Monitored data refers to direct measurements of water quality, including sediment measurements, bioassessments, and some fish tissue analyses (EPA, 1998, 2000).

this test are beyond the scope of this document, but can be found in Smith et al. (2001) and the proposed Chapter 62-303 of the Florida Administrative Code[9].

Whether the binomial or the raw score approach is used, there must be a decision on an acceptable frequency of violation for the numeric criterion, which can range from 0 percent of the time to some positive number. Under the current EPA approach, 10 percent of the sample measurements of a given pollutant made at a station may exceed the applicable criterion without having to list the surrounding waterbody. The choice of 10 percent is meant to allow for uncertainty in the decision process. Unfortunately, simply setting an upper bound on the percentage of measurements at a station that may violate a standard provides insufficient information to properly deal with the uncertainty concerning impairment.

The choice of acceptable frequency of violation is also supposed to be related to whether the designated use will be compromised, which is clearly dependent on the pollutant and on waterbody characteristics such as flow rate. A determination of 10 percent cannot be expected to apply to all water quality situations. In fact, it is inconsistent with federal water quality criteria for toxics that specify allowable violation frequencies of either one day in three years, four consecutive days in three years, or 30 consecutive days in three years (which are all less than 10 percent). Embedded in the EPA raw score approach is an implication that 10 percent is an acceptable violation rate, which it may not be in certain circumstances.

Both the raw score and binomial approaches require the analyst to "throw away" some of the information found in collected data. For example, if the criterion is 1.0, measurements of 1.1 and 10 are given equal importance, and both are treated simply as exceeding the standard. Thus, a potentially large amount of information about the likelihood of impairment is simply discarded. (The standard deviation can be used to set priorities for TMDL development or other restoration activities.) There are other approaches that are more effective at extracting information from a single monitoring sample, thereby reducing the number of samples needed to make a decision with the same level of statistical confi-

[9] This proposed rule chapter was approved for adoption by the Florida Department of Environmental Protection's Environmental Regulation Commission on April 26, 2001, but has not been officially filed for adoption by the Department because of a pending rule challenge before the Division of Administrative Hearings.

dence. For example, Gibbons (in press) suggests testing the data for normality or log normality and then examining the confidence intervals surrounding the estimated 90th percentile of the chosen distribution. When the data are neither normal nor lognormal, or when more than 50 percent of the observations are censored (below the detection limit), Gibbons suggests constructing a nonparametric confidence limit based on the binomial distribution of ranked data. Another approach that uses all the data to make a decision is "acceptance sampling by variables" (Duncan, 1974). In general, alternative statistical approaches transform questions about the proportion of samples that exceed a standard into questions about the center (or another parameter) of a continuous distribution. It should be noted that new approaches will bring new analytical requirements that must be taken into consideration. For example, if there is a requirement to specify a distribution, sufficient data must be available. In some cases, data from other similar sites may be needed to give an overall assessment of distribution type. Finally, as more powerful statistical procedures are used, water quality assessors will need to understand how to run the tests and also how to state hypotheses that clearly relate to the water quality criterion.

Statistical Approaches for Biological Parameters

Error bands exist with any sampled data, including bioassessment results. Thus, bioassessment procedures must also be designed to be statistically sound. The utility of any measure of stream condition depends on how accurately the original sample represents the condition in the stream—that is, how successful it is in avoiding statistical "bias." Protocols to for making such measurements are established in the technical literature (Karr and Chu, 1999) as well as in guidance manuals produced by EPA (Barbour et al., 1996, 1999; EPA, 1998a; Gibson et al., 2000).

There are three principal ways variability is dealt with in the process of deriving and using biocriteria (Yoder and Rankin, 1995). First, variability is compressed through the use of multimetric evaluation mechanisms such as IBI. Reference data for each metric are compressed into discrete scoring ranges (i.e., 5, 3, and 1). Second, variability is stratified via tiered uses, ecoregions, stream size categories (headwaters, wadable, boatable), and method of calibrating each metric (i.e., vectoring expectations by stream size). Third, variability is controlled through standardized operating procedures, data quality objectives (i.e., level of taxonomy), index sampling periods (to control for seasonal effects), replication

of sampling, and training (Yoder and Rankin, 1995). One can, for example, avoid seasonal variation by carefully defining index sampling periods or variation among microhabitats by sampling the most representative microhabitat (Karr and Chu, 1999). Box 3-6 presents results of several studies in which the error around biological parameters was assessed.

BOX 3-6
Understanding Sources of Variability in Bioassessment

Sources of error evaluated in one study of biological monitoring data from New England lakes (Karr and Chu, 1999) included three types of variance: interlake variability (differences among lakes), intralake variability (variability associated with sampling different sites within a lake as decided by the field crew), and lab error (error related to subsample work in the lab). The interlake variability was the effect of interest, and the goal was to determine if that source of variability was dominant. Distribution of variance varied as a function of the biological metric selected. Those measures with reduced variance except for the context of interest (e.g., interlake variability) were selected for inclusion in IBI to increase the probability of detecting and understanding the pattern of interest.

Two other studies involved an examination not of the individual metrics, but of the overall IBI (i.e., after individual metrics were tested and integrated into an IBI). For Puget Sound streams, 9 percent of variation came from differences within streams and 91 percent was variability across streams (reported in Karr and Chu, 1999, Fig. 35). For a study in Grand Teton National Park, streams were grouped in classes reflecting different amounts of human activity in their watersheds. In this case, 89 percent of the variance came from differences among the groups, and 11 percent came from differences among members of the same group (reported in Karr and Chu, 1999).

In all these cases, the goal was to find ways of measuring that emphasize differences among watersheds with differing human influences while keeping other sources of variation small. Success in these examples was based on the development of an earlier understanding of sources of variation and then establishing sampling protocols that avoid other irrelevant sources of variation (such as variation stemming from the differing abilities of personnel to select and use methods). If these sources of variation are controlled for, then the study can emphasize the kind of variation that is of primary interest (e.g., human influence gradients).

Conclusions and Recommendations

1. EPA should endorse statistical approaches to proper monitoring design, data analysis, and impairment assessment. For chemical parameters, these might include the binomial hypothesis test or other statistical approaches that can more effectively make use of the data collected to determine water quality impairment than does the raw score approach. For biological parameters, these might focus on improvement of sampling designs, more careful identification of the components of biology used as indicators, and analytical procedures that explore biological data as well as integrate biological information with other relevant data.

2. States should be required to report the statistical properties of the sample data analyses used to make listing determinations. Error rates, confidence limits, or other means of conveying uncertainty should be presented along with the rationale for a decision to list or delist a waterbody.

USE OF MODELS IN THE LISTING PROCESS

As stated in EPA guidance documents as well as the Federal Advisory Committee Act (FACA) report (EPA, 1998b), monitoring data are the preferred form of information for identifying impaired waters. Model predictions might be used in addition to or instead of monitoring data for two reasons: (1) modeling could be feasible in some situations where monitoring is not, and (2) integrated monitoring and modelir systems could provide better information than monitoring alone for the same total cost. EPA guidance and the FACA report explicitly recognize the obvious practicality of the first reason, but largely ignore the potential importance of the second. This section considers some of the ways in which modeling might be used as a complement to monitoring and points out some limitations of modeling in informing the listing process.

Often, in attempting to estimate the frequency of violation of a standard, the number of pollutant concentration measurements made in a waterbody is so small that it is difficult to avoid false negative error with the desired level of confidence. One way in which a simple statistical model may assist in interpreting monitoring data in such cases is by introducing a variable to the analysis that is correlated with pollutant concentration. One common correlate of many water quality time series is

stream flow, which is measured continuously at many monitoring stations, including nearly all USGS stations. The statistical methods for taking advantage of correlated stream flow data are called record extension techniques, several of which have been described and compared by Hirsch (1982). By modeling pollutant concentration as a function of streamflow and using the resulting model to estimate a denser concentration time series, a better estimate of the frequency distribution of pollutant concentration may be obtained. The predicted concentration time series then may be tested for violation frequency using either the binomial approach (see above) or the quantile approach. The value of this modeling approach over using pollutant data alone is directly dependent on the level of correlation that exists between the pollutant concentration and stream flow. Further discussion of the specific extension technique called MOVE (Maintenance of Variance–Extension) appears in Helsel and Hirsch (1991).

The EPA guidance on 303d listing suggests that a simple, but useful, modeling approach that may be used in the absence of monitoring data is "dilution calculations," in which the rate of pollutant loading from point sources in a waterbody (recorded as kg per day in NPDES permits, for example) is divided by the stream flow distribution to give a set of estimated pollutant concentrations that may be compared to the state standard. Simple dilution calculations assume conservative movement of pollutants through a watershed and ignore the fact that for most pollutants some loss of mass occurs during transport due to a variety of processes including evaporation, settling, or biochemical transformation (see, for example, Novotny and Olem, 1994). Thus, the use of dilution calculations will tend to bias the decision process toward false positive conclusions. Lacking a clear rationale for such a bias, a better approach would be to include a best estimate of the effects of loss processes in the dilution model.

Section 303d and related guidance from EPA emphasize the importance of searching for information on waterbodies that are suspected of violating water quality standards, which is understandable given the desire to limit the number of sites sampled and hence the cost of monitoring. Targeted monitoring will often increase the efficiency of the assessment process (i.e., reduce the total number of decision errors), but may have somewhat hidden effects on the balance of false positive and false negative errors. Targeted monitoring represents the informal use of a prior *probability distribution on impairment* to guide monitoring toward sites located in a particular region of the distribution. One of the

most potentially valuable uses of modeling in relation to 303d listing would be to formalize the use of prior information on impairment probability in order to better organize the decision process. That is, modeling techniques such as SPARROW (Smith et al., 1997) could be used to estimate preliminary impairment distributions for all waterbodies in the state. These distributions would then be used to guide monitoring and control the rates of false positive and false negative error either through Bayesian or other methods of interpreting monitoring data. Limited monitoring resources generally could be focused on the sites where impairment was most *uncertain* (i.e., where the estimated probability of impairment was neither very high nor very low), potentially improving the efficiency of monitoring. Sites at the extremes of the impairment distributions (i.e., extremely likely or unlikely to be impaired) would be less frequently monitored. Decisions for placing waters on a preliminary list might be made primarily on the basis of such modeling. (Formal placement of a waterbody on the 303d list would require additional monitoring.)

Conclusions and Recommendations

1. Models that can fill gaps in data have the potential to generate information that will increase the efficiency of monitoring and thus increase the accuracy of the preliminary listing process. For example, regression analyses that correlate pollutant concentration with some more easily measurable factor could be used to extend monitoring data for preliminary listing purposes. Models can also be used in a Bayesian framework to determine preliminary probability distributions of impairment that can help direct monitoring efforts and reduce the quantity of monitoring data needed for making listing decisions at a given level of reliability.

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4
Modeling to Support the TMDL Process

This chapter addresses the planning step (Figure 1-1) that occurs once a waterbody is formally listed as impaired. The main activity required during the planning step is an assessment of the relative contribution of different stressors (sources of pollution) to the impairment. For example, during this step Total Maximum Daily Loads (TMDLs) are calculated for the chemical pollutant (if there is one) causing the impairment, and the maximum pollutant loads consistent with achieving the water quality standard are estimated. Pollutant load limits alone may not secure the designated use, however, if other sources of pollution are present. Changes in the hydrologic regime (such as in the pattern and timing of flow) or changes in the biological community (such as in the control of alien taxa or riparian zone condition) may be needed to attain the designated use, as discussed in Chapter 2. As hydrologic, biological, chemical, or physical conditions change, the estimation of the TMDL can change.

Because they represent our scientific understanding of how stressors relate to appropriate designated uses, models play a central role in the TMDL program. Models are the means of making predictions—not only about the TMDL required to achieve water quality standards, but also about the effectiveness of different actions to limit pollutant sources and modify other stressors to reach attainment of a designated use. This chapter discusses the necessity for, and limitations of, models and other predictive approaches in the TMDL process. Thus, it directly addresses the committee's charge of evaluating the TMDL program's information needs and the methods used to obtain information.

MODEL SELECTION CRITERIA

Mathematical models can be characterized as empirical (also known as statistical) or mechanistic (process-oriented), but most useful models have elements of both types. An empirical model is based on a statistical fit to data as a way to statistically identify relationships between stressor and response variables. A mechanistic model is a mathematical characterization of the scientific understanding of the critical biogeochemical processes in the natural system; the only data input is in the selection of model parameters and initial and boundary conditions. Box 4-1 presents a simple explanation of the difference between the two types of models.

Water quality models for TMDL development are typically classifi as either watershed (pollutant load) models or as waterbody (pollutant response) models. A watershed model is used to predict the pollutant load to a waterbody as a function of land use and pollutant discharge; a waterbody model is used to predict pollutant concentrations and other responses in the waterbody as a function of the pollutant load. Thus, the waterbody model is necessary for determining the TMDL that meets the water quality standard, and a watershed model is necessary for allocating the TMDL among sources. Some comprehensive modeling frameworks [e.g., BASINS (EPA, 2001) and Eutromod (Reckhow et al., 1992)] include both, but most water quality models are of one or the other type. Except where noted, the comments in this chapter reflect both watershed and waterbody models; examples presented may address one or the other model type as needed to illustrate concepts.

Although prediction typically is made with a mathematical model, there are certainly situations in which expert judgment can and should be employed. Furthermore, although in many cases a complex mathema cal model can be developed, the model best suited for the situation may be relatively simple, as noted in examples described later in the chapter. Indeed, reliance on professional judgment and simpler modeling will be acceptable in many cases, and is compatible with the adaptive approach to TMDLs described in Chapter 5.

Highly detailed models are expensive to develop and apply and may be time consuming to execute. Much of the concern over costs of TMDLs appears to be based on the assumption that detailed modeling techniques will be required for most TMDLs. In the quest to efficiently allocate TMDL resources, states should recognize that simpler analyses can often support informed decision-making and that complex modeling studies should be pursued only if warranted by the complexity of the

BOX 4-1
Mechanistic vs. Statistical Models

Suppose a teacher is conducting a lesson on measurements and sets out to measure and record the height and weight of each student. Unfortunately, the scale breaks after the first several children have been weighed. In order to proceed with the lesson (though on a somewhat different tack), a *mechanistically* inclined teacher might decide to use textbook data on the density of the human body, together with a variety of length measurements for each child (e.g., waist, leg, and arm dimensions), to estimate body volumes as the sum of the volumes of body parts. The teacher may then obtain the weights of the students as the product of density and volume. A *statistically* inclined teacher, on the other hand, might simply use the data obtained for the first several children in a regression model of weight on height that could then be used to predict the weights of the other students based on their height.

The accuracy and utility of each of these two approaches depend on both the details of the input data and the calculation procedures. If the mechanistic teacher has good information on tissue densities, for example, and has the time to make many length measurements, the results may be quite good. Conversely, the statistical approach may yield quite acceptable results at a fraction of the mechanistic effort, if enough children had been weighed before the scale broke and if those children were approximately representative of the whole class in terms of body build. Moreover, the regression model comes with error statistics for its predictions and parameters. Although the same statistical approach would work with other groups of students, additional weight measurements would be required for model calibration. Thus, the benefits of the statistical approach are that it is less costly and its reliability is known, but its use is dependent on data collected for the variable of interest (weight, in this case) under the circumstances of interest. The mechanistic approach has wider application and a clear rationality (the total equals the sum of the parts) but it requires more time and effort and, unless some data are collected for the variable of interest under similar circumstances, its error characteristics are unknown.

Of course, in practice, mechanistic and statistical models are often make considerable use of each other's techniques. In the classroom analogy, for example, it would make sense for the statistically inclined teacher to make more detailed measurements of the weighed students' dimensions and develop a multivariate regression model of weight as a function of torso volume (e.g., volume, etc., rather than height alone). The more complex model could be applied to a wider range of body builds. Moreover, the regression coefficients would represent the estimated densities of different parts of the body. These could be compared with the textbook values of body density as a test of the rationality of the model. Conversely, the mechanistic teacher might use body density data from the textbook to adjust the height–weight regression equations for use with different age and ethnic groups. This would eliminate the need for collecting additional weight data for these groups.

It is also worth distinguishing a third type of model termed *stochastic* that is widely used in engineering applications and that may have a useful role in TMDL modeling. The objective of stochastic modeling is to simulate the statistical behavior of a system by imposing random variability on one or more terms in the model. Such models are usually fundamentally mechanistic but avoid mechanistic description of complex processes by using simpler, randomized terms. Stochastic models generally require a large number of measurements of certain variables (e.g., inputs, state variables) in order to correctly characterize their random behavior. As an example, consider a mechanistic model of river water quality that includes randomly generated streamflow and pollutant loads. If the randomly generated inputs are realistic (both individually and in relation to each other), then the output may provide a very useful description of the variability to expect in the water quality of the river. If

analytical problem. More complex modeling will not necessarily assure that uncertainty is reduced, and in fact can compound problems of uncertain predictions. As discussed below, accounting for uncertainty and representing watershed processes are two of the possible criteria that need to be considered when selecting an analytical model for TMDL development.

TMDLs, which are typically evaluated through predictive modeling, lead to decisions concerning controls on pollutant sources or other stressors. Thus, models used in TMDL analysis provide "decision support."

Box 4-2 lists *desirable* model selection/evaluation criteria in consideration of the decision support role of models in the TMDL process. The list is intended to characterize an ideal model. Given the limitations of existing models, it should not be viewed as a required checklist for attributes that all present-day TMDL models must have.

EPA has supported water quality model development for many years and, along with the U.S. Geological Survey (USGS), the U.S. Army Corps of Engineers, and the U.S. Department of Agriculture, is responsi-

BOX 4-2
Model Selection Criteria

A predictive model should be broadly defined to include both mathematical expressions and expert scientific judgment. A predictive model useful for TMDL decision support ideally should have the following characteristics:

1. *The model focuses on the water quality standard.* The model is designed to quantitatively link management options to meaningful response variables. This means that it is desirable to define the TMDL endpoints (e.g., pollutant sources and standard violation parameter) and incorporate the entire chain from stressors to response into the modeling analysis. This also means that the spatial/temporal scales of the problem and the model should be compatible.
2. *The model is consistent with scientific theory.* The model does not err in process characterization. Note that this is different from the often-stated goal that the model correctly represents processes which, for terrestrial and aquatic ecosystems, cannot be achieved.
3. *Model prediction uncertainty is reported.* Given the reality of prediction errors, it makes sense to explicitly acknowledge the prediction uncertainty for various management options. This provides decision-makers with an understanding of the risks of options, and allows them to factor this understanding into their decisions. To do this, prediction error estimates are required.
4. *The model is appropriate to the complexity of the situation.* Simple water quality problems can be addressed with simple models. Complex water quality problems may or may not require the use of complex models (as discussed later in this chapter and in Chapter 5).
5. *The model is consistent with the amount of data available.* Models requiring large amounts of monitoring data should not be used in situations where such data are unavailable.
6. *The model results are credible to stakeholders.* Given the increasing role of stakeholders in the TMDL process, it may be necessary for modelers to provide more than a cursory explanation of the predictive model.
7. *Cost for annual model support is an acceptable long-term expense.* Given growth and change, water quality management will not end with the initial TMDL determination. The cost of maintaining and updating the model must be tolerable over the long term.
8. *The model is flexible enough to allow for later improvements.* Research can be expected to improve scientific understanding leading to refinements in models. The model

ble for most models currently being applied for TMDL development. Agency-wide, EPA has funded model development and technology transfer activities for a wide range of models. The greatest concentration of this effort has been at the Center for Exposure Assessment Modeling (CEAM). In contrast to the broad perspective found within EPA as a whole, CEAM has demonstrated a clear preference for mechanistic models, as evidenced by their adoption of the BASINS modeling system (EPA, 2001) as the primary TMDL modeling framework.

Models developed at the CEAM and incorporated into BASINS place high priority on correctly describing key processes, which is related to but different from model selection criterion #2 (see Box 4-2). It is important to recognize that placing priority on ultimate process description often will come at the expense of the other model selection criteria. For one thing, an emphasis on process description tends to favor complex mechanistic models over simpler mechanistic or empirical models and may result in analyses that are more costly than is necessary for effective decision-making. In addition, physical, chemical, and biological processes in terrestrial and aquatic environments are far too complex to be conceptually understood or fully represented in even the most complicated models. For the purposes of the TMDL program, the primary purpose of modeling should be to support decision-making. Our inability to completely describe all relevant processes can be accounted for by quantifying the uncertainty in the model predictions.

UNCERTAINTY ANALYSIS IN WATER QUALITY MODELS

The TMDL program currently accounts for the uncertainty embedded in the modeling exercise by applying a margin of safety (MOS). As discussed in Chapter 1, the TMDL can be represented by the following equation:

$$TMDL = \Sigma WLA + \Sigma LA + MOS$$

This states that the TMDL is the sum of the present and near future load of pollutants from point sources and nonpoint and background sources to receiving waterbodies plus an adequate margin of safety (MOS) needed to attain water quality standards.

One possible metric for the point source waste load allocation (ΣWLA) and the nonpoint source load allocation (ΣLA) is mass per unit time, where time is expressed in days. However, other units of time may

actually be more appropriate. For example, it may be better to use a season as the time unit when the TMDL is calculated for lakes and reservoirs, or a year when contaminated sediments are the main stressor.

EPA (1999) gives additional ways in which a TMDL can be expressed:

- the required reduction in percentage of the current pollution load to attain and maintain water quality standards,
- the required reduction of pollutant load to attain and maintain riparian, biological, channel, or morphological measures so that water quality standards are attained and maintained, or
- the pollutant load or reduction of pollutant load that results from modifying a characteristic of a waterbody (e.g., riparian, biological, channel, geomorphologic, or chemical characteristics) so that water quality standards are attained and maintained.

The MOS is sometimes a controversial component of the TMDL equation because it is meant to protect against potential water quality standard violations, but does so at the expense of possibly unnecessary pollution controls. Because of the natural variability in water quality parameters and the limits of predictability, a small MOS may result in nonattainment of the water quality goal; however, a large MOS may be inefficient and costly. The MOS *should* account for uncertainties in the data that were used for water quality assessment and for the variability of background (natural) water quality contributions. It should also reflect the reliability of the models used for estimating load capacity.

Under current practice, the MOS is typically an arbitrarily selected numeric safety factor. In other cases, a numeric value is not stated, and rather conservative choices are made about the models used and the effectiveness of best management practices. Consistent with our concerns, NRC (2000) notes that since parameters involved in the TMDL determination are probabilistic and the MOS is a measure of uncertainty, the MOS should be determined through a formal uncertainty and error propagation analysis. There is also a compelling practical reason for explicit and thorough quantification of uncertainty in the TMDL via the MOS—reduction of the MOS can potentially lead to a significant reduction in TMDL implementation cost. On this basis alone, EPA should place a high priority on estimating TMDL forecast uncertainty and on selecting and developing TMDL models with minimal forecast error.

Model prediction error can be assessed in two ways. First, Monte Carlo simulation can be used to estimate the effect of model parameter error, model equation error, and initial/boundary condition error on prediction error. This process is data-intensive and may be computationally unwieldy for large models. A second and simpler alternative is to compare predictions with observations, although the correct interpretation of this analysis is not as straightforward as it may seem. If a model is "overfitted" to calibration data and the test or "verification" data are not substantially different from the calibration data, the prediction–observation comparison will underestimate the prediction error. The best way to avoid this is to obtain independent verification data substantiated with a statistical comparison between calibration data and verification data.

To date, we are aware of no thorough error propagation studies with the mechanistic models favored by EPA (by thorough, we mean that all errors and error covariance terms are estimated and are plausible for the application). Further, the track record associated with even limited uncertainty analyses is not encouraging for water quality models in general. Among empirical models, only the relatively simple steady-state nutrient input–output models have undergone reasonably thorough error analyses. For example, Reckhow and Chapra (1979) and Reckhow et al. (1992) report prediction error of approximately 30 percent to 40 percent for cross-system models that predict average growing season total phosphorus or total nitrogen concentration based on measured annual loading. Prediction errors are likely to be higher for applications based on estimated or predicted loading. Prediction error will be higher still when these simple models are linked to statistical models to predict chlorophyll *a*, Secchi disk transparency, or an integrative measure of biological endpoints.

Most error analyses conducted on mechanistic water quality models have also focused on eutrophication, so relatively little is known of prediction error for toxic pollutants, microorganisms, or other important stressors. In one of the few relatively thorough error propagation studies, Di Toro and van Straten (1979) and van Straten (1983) used maximum likelihood to determine point estimates and covariances for parameters in a seasonal phytoplankton model for Lake Ontario. Of particular note, they found that prediction error decreased substantially when parameter covariances were included in error propagation, underscoring the importance of including covariance terms in error analyses. This result occurred because, while individual parameters might be highly uncertain, specific *pairs* of parameters (e.g., the half saturation constant and the maximum growth rate in the Michaelis–Menten model) may vary in a

predictable way (expressed through covariance) and thus may be *collectively* less uncertain. Di Toro and van Straten found the prediction coefficient of variation to range from 8 percent (for nitrate-N) to 390 percent (for ammonia-N), with half of the values falling between 44 percent and 91 percent. Zooplankton prediction errors tended to be much higher. Beck (1987) found that the error levels cited in these studies are typical of those reported elsewhere. There is evidence to suggest that the current models of water quality, in particular, the larger models, are capable of generating predictions to which little confidence can be attached (Beck, 1987).

The need for understanding the prediction uncertainty of chosen models is not new. Indeed, recent TMDL modeling and assessment guidance from EPA often mentions the importance of formal uncertainty analysis in determining the MOS (EPA, 1999). However, EPA has consistently failed to either recommend predictive models that are amenable to thorough uncertainty analysis or provide adequate technical guidance for reliable estimation of prediction error.

Conclusions and Recommendations

1. EPA needs to provide guidance on model application so that thorough uncertainty analyses will become a standard component of TMDL studies. Prediction uncertainty should be estimated in a rigorous way, and models should be evaluated and selected considering the prediction error need. The limited error analysis conducted within the QUAL2E-UNCAS model (Brown and Barnwell, 1987) was a start, but there has been little progress at EPA in the intervening 14 years.

2. The TMDL program currently accounts for the uncertainty embedded in the modeling exercise by applying a margin of safety (MOS); EPA should end the practice of arbitrary selection of the MOS and instead require uncertainty analysis as the basis for MOS determination. Because reduction of the MOS can potentially lead to a significant reduction in TMDL implementation cost, EPA should place a high priority on selecting and developing TMDL models with minimal forecast error.

3. Given the computational difficulties with error propagation for large models, EPA should selectively target some postimplementation TMDL compliance monitoring for verification data collection to assess model prediction error. TMDL model choice is currently hampered by the fact that relatively few models have undergone thorough uncertainty analysis. Postimplementation monitoring at selected sites can yield valuable data sets to assess the ability of models to reliably forecast response. Large or complex models that pose an overwhelming computational burden for Monte Carlo simulation are particularly good candidates for this assessment.

MODELS FOR BIOTIC RESPONSE: A CRITICAL GAP

The development of models that link stressors (such as chemical pollutants, changes in land use, or hydrologic alterations) to biological responses is a significant challenge to the use of biocriteria and for the TMDL program. There are currently no protocols for identifying stressor reductions necessary to achieve certain biocriteria. A December 2000 EPA document (EPA, 2000) on relating stressors to biological condition suggests how to use professional judgment to determine these relationships, but it offers no other approaches. As discussed below, informed judgment can be effectively used in simple TMDL circumstances, but in more complex systems, empirical or mechanistic models may be required.

There have been some developments in modeling biological responses as a function of chemical water quality. One approach attempts to describe the aquatic ecosystem as a mechanistic model that includes the full sequence of processes linking biological conditions to pollutant sources; this typically results in a relatively complex model and depends heavily on scientific knowledge of the processes. The alternative is t build a simpler empirical model of a single biological criterion as a function of biological, chemical, and physical stressors. Both approaches have been pursued in research dating back at least 30 years, and there has been some progress on both fronts. One promising recent approach is to combine elements of each of these methods. For example, Box 4-3 describes a probability network model that has both mechanistic and empirical elements with meaningful biological endpoints.

Advances in mechanistic modeling of aquatic ecosystems have occurred primarily in the form of greater process (especially trophic) detail and complexity, as well as in dynamic simulation of the system (Chapra, 1996). Still, mechanistic ecosystem models have not advanced to the point of being able to predict community structure or biotic integrity. Moreover, the high level of complexity that has been achieved with this

BOX 4-3

Neuse Estuary TMDL Modeling

The Neuse Estuary is listed for chlorophyll *a* violations (exceedances of 40 µg/l), and nitrogen is the pollutant for which a TMDL is developed. Two distinct estuarine models have been developed to guide the TMDL process: one is a two-dimensional process model (CE-Qual-W2), and the other is a probability (Bayes) network model (Borsuk, 2001), depicted in Figure 1.

This probability network model has several appealing features that are compatible with the modeling framework proposed here.

- The probabilities in the model are an expression of uncertainty.
- The conditional probabilities characterizing the relationships described in Figure 1 reflect a combination of simple mechanistic, statistical (regression) fitting, and expert judgment.
- Some of the model endpoints—estimated using judgmental probability elicitation, which is a rigorous, established process for quantifying scientific knowledge (Morgan and Henrion, 1990)—such as "shellfish survival" and "number of fishkills," characterize biological responses that are more directly meaningful to stakeholders and can easily be related to designated use.

The Neuse Bayes network is a waterbody model. It is being linked to the USGS SPARROW watershed model for allocation of the TMDL.

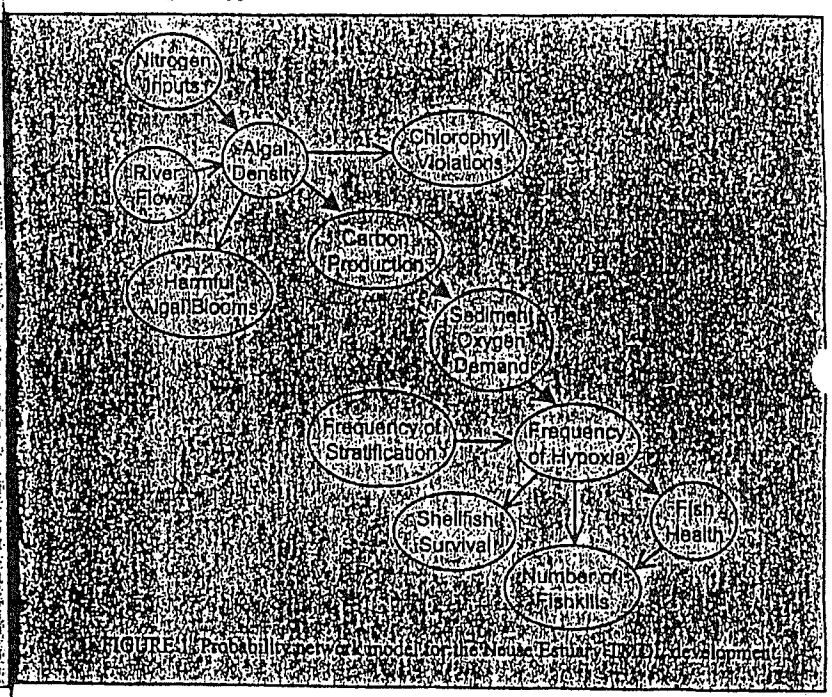

FIGURE 1 Probability network model for the Neuse Estuary TMDL development.

approach has made it difficult to use statistically rigorous calibration methods and to conduct comprehensive error analyses (Di Toro and van Straten, 1983; Beck, 1987).

The empirical approach depends on a statistical equation in which the biocriterion is estimated as a function of a stressor variable. Success with this empirical approach has been primarily limited to models of relatively simple biological metrics such as chlorophyll *a* (Peters, 1991; Reckhow et al., 1992). For reasons that are not entirely clear, empirical models of higher-level biological variables, such as indices of biotic integrity, have not been widely used. Regressions of biotic condition on chemical water quality measures are potentially of great value in TMDL development because of their simplicity and transparent error characteristics. Two accuracy issues, however, need to be considered. First is the obvious question of whether the level of statistical correlation between biotic metrics and pollutant concentrations is strong enough that prediction errors will be acceptable to regulators and stakeholders. A second and more difficult issue is that of gaining assurance of a cause–effect relationship between chemical predictors and biotic metrics. The construction of empirical models of biotic condition would benefit greatly from (1) observational data that show the effects of changes in chemical concentrations over a time period when other factors have remained relatively constant and (2) inclusion of as many factors that are relevant to biotic condition as possible. The latter, of course, increases the requirement for observational data. Despite these limitations, in the near term, empirical models may more easily fill the need for biological response models than would mechanistic models.

Conclusions and Recommendations

1. EPA should promote the development of models that can more effectively link environmental stressors (and control actions) to biological responses. Both mechanistic and empirical models should be

explored, although empirical models are more likely to fill short-term needs. Such models are needed to promote the wider use of biocriteria at the state level, which is desirable because biocriteria are a better indicator of designated uses than are chemical criteria.

ADDITIONAL MODEL SELECTION ISSUES

Data Required

The use of complex mechanistic models in the TMDL program is warranted if it helps promote the understanding of complex systems, as long as uncertainties in the results are reported and incorporated into decision-making. However, there may be a tendency to use complex mechanistic models to conduct water quality assessments in situations with little useful water quality data and/or involving major remediation expenditures or legal actions. In these situations, there is usually a common belief that the expected realism in the model can compensate for a lack of data, and the complexity of the model gives the impression of credibility. However, given that uncertainty in models is likely to be exacerbated by a lack of data, the recommended strategy is to begin with a simple modeling study and iteratively expand the analysis as needs and new information dictate.

For example, a simple analysis using models like those described by EPA (Mills et al., 1985) as screening procedures could be run quickly at low cost to begin to understand the issues. This understanding might suggest (perhaps through sensitivity analysis) that data should be collected on current land use, or that a limited monitoring program is warranted. Following acquisition of that information/data, a revised (perhaps more detailed) model could be developed. This might result in the TMDL (to be further evaluated using adaptive implementation as described in Chapter 5), or it might lead to further data collection and refinement of the model. This strategy for data-poor situations makes efficient use of resources and targets the effort toward information and models that will reduce the uncertainty as the analysis proceeds.

The data required for TMDL model development will be a function of the water quality criterion and its location and the analytical procedures used to relate the stressors to the criterion. Data needs may include hydrology (streamflow, precipitation), ambient water quality measures, and land use and elevation in a watershed (see Box 4-4 for more infor-

BOX 4-4

Data Requirements for TMDL Modeling of Pollutants

The data and information required for TMDL modeling must reflect the parameters that affect attainability of water quality standards. Many of the models used today have extremely large data requirements, a fact that must be addressed prior to TMDL development so that adequate data collection can occur.

Flow Data. Critical to the process of calibrating and verifying models are flow data from sources and various locations in the receiving water. Flow data are generally high in quality if gathered as part of unidirectional stream surveys but become less reliable in areas subject to tidal effects. The USGS is generally considered to be the most reliable source for long-term, high-quality data sets. Tidal records are available historically and for predictive purposes for many coastal waters in the United States from the National Oceanic and Atmospheric Administration. Some states have maintained long-term gages in coastal waters but these are usually few in number.

Ambient Water Quality Data. A number of federal agencies, state agencies, regional organizations, and research groups collect surface water quality data. Many of these data are retrievable over the Internet, particularly data from the USGS and EPA. Although there is no universal repository for all surface water quality data, the STORET database is the most comprehensive. Because methods of collection and analysis may vary, there is a need for QA/QC of these data.

Land Use Data. All states should have access to statewide land use records and projections. For ease of use, the land use data sets should be made available as Geographic Information System (GIS) coverages. EPA has provided default coverages as a component of its BASINS model. For TMDL purposes, land use data are required for the time period over which water quality data are available in order to calibrate and validate models. Projected land use data are needed for predicting future scenarios. The overall quality of these land use data will vary often as a function of the level of ground truthing that was done or the accuracy of the predictions for future land use changes.

Point Source Data. Model inputs may include measured values of pollutant loading from point sources (e.g., based on information reported on NPDES Discharge Monitoring Reports submitted by permitted facilities). Other possible data sources include results from periodic compliance inspections and wasteload allocation studies or data collected as part of field surveys done in support of the TMDL. Such data are generally available and reliable.

BOX 4-4 continues

BOX 4-4 Continued

Nonpoint Source Data. Data on pollutant loadings from nonpoint sources are much less available and reliable than data from point sources. This is partly because during high-flow, high-rainfall events, monitoring is only infrequently conducted. For nonpoint sources, Event Mean Concentrations (EMCs) are needed to estimate the loadings that are delivered from each significant land use in a basin. EMCs are useful tools in providing estimated nonpoint source loads. Given the wider range of actual loads that may be associated with nonpoint sources, these estimates frequently represent the best science available.

Atmospheric Deposition. Data on pollutant loadings from atmospheric deposition have been compiled by the National Atmospheric Deposition Program/National Trends Network (NADP/NTN) using a nationwide network of precipitation monitoring sites to generate reliable estimates of loads for many parameters. However, unlike watersheds, airsheds vary in size, depending upon the pollutant of concern and its specific forms and chemistry. Assessing the atmospheric contribution to any one basin is complicated by variations attributable to factors such as seasonal shifts in prevailing winds and distance from contributing sources. Thus, it is currently difficult to differentiate impacts from local sources vs. remote sources. For example, although significant work has been done in the northeastern United States to link sources of nitrous oxides with the areas subject to impact, similar studies elsewhere are not routinely available. Data for parameters other than those covered by NADP sites, as well as data on basin-specific wet and dry atmospheric deposition rates are also scant.

Legacy/Upstream Sources. For many impaired waters, states will need to identify and estimate loads attributed to legacy sources (e.g., PCBs/DDT or the phosphorus-laden lake sediments) and upstream sources (those entering a waterbody segment upstream of the watershed currently being studied). The availability and reliability of such data vary widely across the nation.

Best Management Practices. TMDL development will in many cases require estimates of the treatment efficiency for a best management practice (BMP). Such data are generally not available except for a small number of well-studied stormwater BMPs and a limited number of pollutants (see NRC, 2000). To account for these deficiencies, states might use best professional judgment to estimate the percent reduction, taking into account treatment provided by similar BMPs and stakeholder input. EPA has recently provided funding for a national database designed to help states track the effectiveness of BMPs as they are developed and evaluated. Databases of BMP effectiveness are currently available at ASCE (1999) and Winer (2000).

mation). TMDL development will also likely require data on point/ nonpoint sources and pollutant loads, atmospheric deposition, the effectiveness of current best management practices, and legacy/upstream pollutant sources. Because the amount of available data varies with site, there is no absolute minimum data requirement that can be universally set for TMDL development. Data availability is one source of uncertainty in the development of models for decision support. Although there are other sources of uncertainty as well, models should be selected (simple vs. complex) in part based on the data available to support their use.

Simple vs. Complex Models

The model selection criteria concerning cost, flexibility, adaptability, and ease of understanding (Box 4-2) all tend to favor simple models, although they may fail to adequately satisfy the first criterion. There are many situations, however, when an exceedingly simple model is all that is needed for TMDL development, particularly when combined with adaptive implementation (to be discussed in Chapter 5). For example, it is not uncommon in many states for farm fields to straddle small streams, with cows being allowed to freely graze in and around the stream. If a downstream water quality standard is violated, a simple mental model linking the cows to the violation, and subsequent actions in which the first step might be to limit cow access to the riparian corridor, may ultimately be sufficient for addressing the impairment. This example is certainly not intended to suggest that all TMDLs will be simple, but it does suggest the value of simple analyses and iterative implementation. Box 4-5 presents a relatively simple modeling exercise (based on a statistical rather than mechanistic model) that was used successfully to develop a TMDL for clean sediment.

With regard to mechanistic models, there is no intrinsic reason to choose the particular scales that have become the basis for representing processes in the majority of mechanistic water quality models. As an alternative, Borsuk et al. (2001) have shown that it is possible to specify relatively simple mechanistic descriptions of key processes in aquatic ecosystems, which limits the dimension of the parameter space so that parameters may be estimated using least squares or Bayesian methods on the available data. The SPARROW model (Smith et al., 1997) is another more statistically based alternative that includes terms and functions that reflect processes. These efforts suggest that a fruitful research direction for the TMDL program is the development of models that are based on

BOX 4-5

Use of a Simple Empirical Model: Suspended Sediment Rating Curve for Deep Creek, MT

One relatively simple form of model that has been used successfully in many TMDL applications is a statistical regression of a water quality indicator on one or more predictor variables. The indicator may be either the pollutant named in the TMDL or a related metric used to determine impairment but not directly involved in the TMDL analysis. Such a model was used to develop a TMDL for suspended sediment in Deep Creek, MT (see Endicott, 1996). The designated use of that waterbody was to support a cold water fishery and its associated biota, especially to provide high-quality spawning areas for rainbow and brown trout from a nearby reservoir. The reservoir and the river provide a blue-ribbon trout fishery. Analyzing the effects of suspended sediment on salmonids is complicated by the fact that sediment concentrations in western trout streams increase dramatically with streamflow in healthy as well as sediment-impaired streams, but are lower at any given flow in the healthy streams than in the impaired streams. Suspended sediment concentrations at all stages of the hydrograph are important biologically.

To develop a sediment TMDL at this site, modelers compared the relationship of sediment concentration to streamflow (known as the "sediment rating curve") at the impaired site to the corresponding sediment rating curve for an unimpaired reference site. Rating curves were developed by regressing sediment concentration on streamflow. In the case of Deep Creek, the sediment–flow relationship is approximately linear with a slope of 0.51 mg l^{-1} per ft^3 sec^{-1}. Based on rating curves for reference streams of similar size in the area (Endicott, 1996), an appropriate slope would be 0.26 mg l^{-1} per ft^3 sec^{-1}. Thus the goal of TMDL implementation is to lower the Deep Creek ratio by about half. According to the approved TMDL management plan, certain channel modifications and a combination of riparian and grazing BMPs are expected to reduce the slope of the sediment rating curve and restore the health of the trout fishery. Determination of whether the control measures have reduced the rating curve slope to the target level can be accomplished in the future by a hypothesis test on the slope parameter of the revised regression of concentration on flow. The Type 1 and Type 2 error rates for this decision-making method will relate directly to the statistical confidence limits on the estimated slope parameter and are controllable through the quantity of monitoring data collected after the control measures are in place.

There are several aspects of this modeling approach that make it well suited to the TMDL problem. The analysis was simple to carry out and relatively easy for stakeholders to understand. Despite its simplicity, the model focuses on a critical aspect of the Deep Creek ecosystem—suspended sediment concentrations over the entire hydrograph. Future decision-making on the success of the management plan can be based on an objective test with known error rates that are controllable through monitoring.

process understanding yet are fitted using statistical methods on the observational data.

Pilot Watersheds

Another approach to consolidate modeling efforts and develop TMDLs more efficiently is the pilot watershed concept[1]. Many TMDLs involve small- to medium-sized watersheds that have a dominating nonpoint source pollution problem (e.g., the Corn Belt region, watersheds draining forested areas, or suburban watersheds). Watersheds located in the same ecoregion may have similar water quality problems and solutions. Thus, a detailed modeling study of one or two benchmark watersheds can provide problem identification and solutions. These findings could potentially be extrapolated to less investigated but similar watersheds.

Conclusions and Recommendations

If accompanied by uncertainty analysis, many existing models can be used to develop TMDLs in an adaptive implementation framework. Adaptive implementation, discussed in detail in Chapter 5, will allow for both model development over time and the use of currently available data and methods. It provides a level of assurance that the TMDL will ultimately be successful even with high initial forecast uncertainty.

1. **EPA should not advocate detailed mechanistic models for TMDL development in data-poor situations.** Either simpler, possibly judgmental, models should be used or, preferably, data needs should be anticipated so that these situations are avoided. The strategy of accounting for data-limited TMDLs with increasingly detailed models

[1] In various forms, "pilot watersheds" have for years been the basis for understanding land use impacts on water quality. The concept is implicit in the acceptance and use of export coefficients for pollutant load assessment. A prominent example is the series of PLUARG (Pollution from Land Use Activities Reference Group) studies to determine the total loads of pollutants to the Great Lakes. The group used several pilot watersheds on each side of the border and extrapolated the detailed monitoring and modeling results into the entire Great Lakes basin.

needs rigorous verification before it should be endorsed and implemented. Starting with simple analyses and iteratively expanding data collection and modeling as the need arises is the best approach.

2. EPA needs to provide guidance for determining the level of detail required in TMDL modeling that is appropriate to the needs of the wide range of TMDLs to be performed. The focus on detailed mechanistic models has resulted in complex, costly, time-consuming modeling exercises for single TMDLs, potentially taking away resources from hundreds of other required TMDLs. Given the variety of existing watershed and water quality models available, and the range of relevant model selection criteria, EPA should expand its focus beyond mechanistic process models to include simpler models. This will support the use of adaptive implementation.

3. EPA should support research in the development of simpler mechanistic models that can be fully parameterized from the available data. This would lead to models that meet several model selection criteria present in Box 4-2, such as consistency with theory, assessing uncertainty, and consistency with available data.

4. To more efficiently use scarce resources, EPA should approve the use of pilot watersheds for TMDL modeling. Rather than detailed models being prepared for every impaired waterbody, pilot TMDLs could be prepared in detail for a benchmark watershed (e.g., a typical suburban or agricultural watershed), and the results could be extrapolated to similar watersheds located in the same ecoregion. The notion of extending modeling results to similar areas, which underlies the present-day use of export coefficients, is reasonable if applied in the framework of adaptive implementation. Such a framework, coupled with the rapid application of specific controls/approaches in a number of watersheds, can reveal where techniques do or do not work and can allow for appropriate modifications.

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5
Adaptive Implementation for Impaired Waters

Water quality assessment is a continuous process. The finding of an impaired waterbody during assessment triggers a sequence of events that may include listing of the water, development of a Total Maximum Daily Load (TMDL), planning of state and federal actions, and implementation events designed to comply with water quality standards—all of which are characterized by uncertainty. This chapter describes the process of adaptive implementation of a water quality plan. Adaptive implementation simultaneously makes progress toward achieving water quality standards while relying on monitoring and experimentation to reduce uncertainty.

SCIENCE AND THE TMDL PROCESS

The planning sequence of moving from data to analysis to information and knowledge is supposed to provide confidence that the sometimes costly actions to address a water quality problem are justified. desire for this confidence is often behind the call for "sound science" in the TMDL program. However, the ultimate way to improve the scientific foundation of the TMDL program is to incorporate the *scientific method*, not simply the results from analysis of particular data sets or models, into TMDL planning. The scientific method starts with limited data and information from which a tentatively held hypothesis about cause and effect is formed. The hypothesis is tested, and new understanding and new hypotheses can be stated and tested. By definition, science is this process of continuing inquiry. Thus, calls to make policy decisions based on the "the science," or calls to wait until "the science is complete," reflect a misunderstanding of science. Decisions to pursue some actions must be made, based on a preponderance of evidence, but there may be a need to continue to apply science as a process (data col-

lection and tools of analysis) in order to minimize the likelihood of future errors.

Many debates in the TMDL community have centered on the use of "phased" and "iterative" TMDLs. Because these terms have particular meanings, this report uses a more general term—adaptive implementation. Adaptive implementation is, in fact, the application of the scientific method to decision-making. It is a process of taking actions of limited scope commensurate with available data and information to continuously improve our understanding of a problem and its solutions, while at the same time making progress toward attaining a water quality standard. Plans for future regulatory rules and public spending should be tentative commitments subject to revision as we learn how the system responds to actions taken early on.

Like other chapters, this chapter discusses a framework for water quality management (shown in Figure 5-1, which is the same as Figure 3-1). Before turning to adaptive implementation, it discusses an important prior step—review of water quality standards. Before a waterbody is placed on the action (303d) list, it is suggested that states conduct a review of the appropriateness of the water quality standard. The standards review may result in the water not being listed as impaired if the standard used for the assessment was found to be inappropriate. On the other hand, the same process may result in a "stricter" standard than was used in the assessment process, in which case the waterbody would have a TMDL plan developed to achieve that revised standard. A review of the water quality standard will assure that extensive planning and implementation actions are directed toward clearly conceived designated uses and associated criteria to measure use attainment.

REVIEW OF WATER QUALITY STANDARDS

Water quality standards are the benchmark for establishing whether a waterbody is impaired; if the standards are flawed (as many are), all subsequent steps in the TMDL process will be affected. Although there is a need to make designated use and criteria decisions on a waterbody and watershed-specific basis, most states have adopted highly general use designations commensurate with the federal statutory definitions. However, an appropriate water quality standard must be defined *before* a TMDL is developed. Within the framework of the Clean Water Act (CWA), there is an opportunity for such analysis, termed use attainability analysis (UAA).

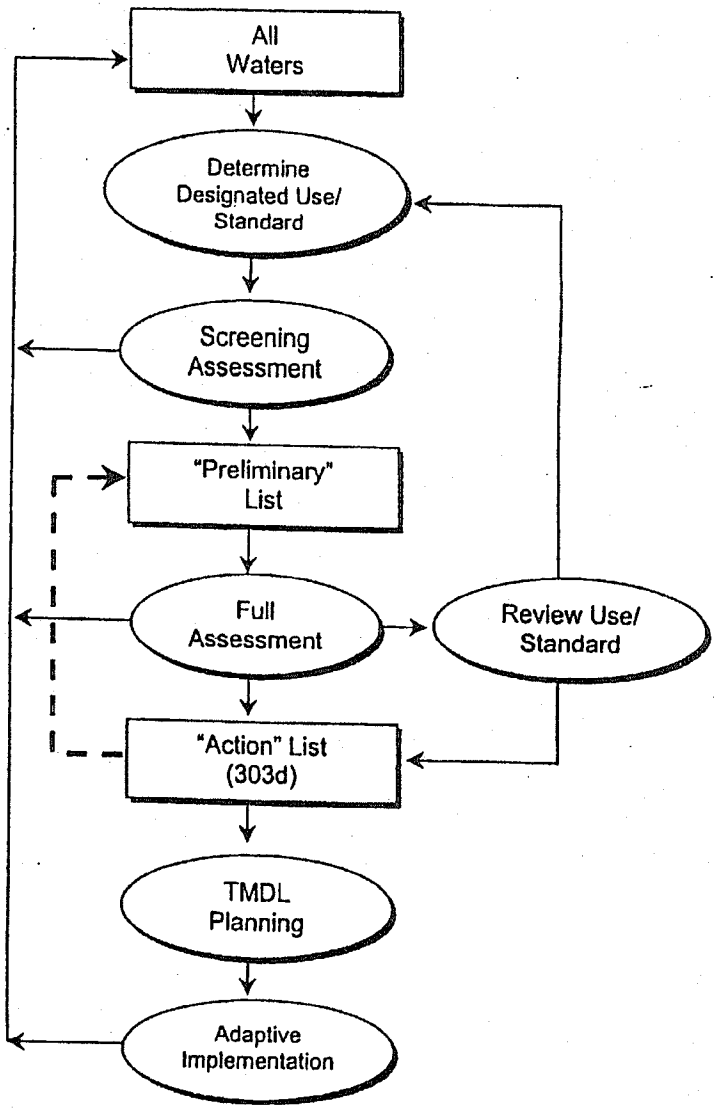

FIGURE 5-1 Framework for water quality management.

A UAA determines if impairment is caused by natural contaminants, nonremovable physical conditions, legacy pollutants, or natural conditions (see Box 5-1). More importantly, a UAA can refine the water quality standard. UAA should result in more stratified and detailed narrative statements of the desired use and measurable criterion. For example, a UAA might refine the designated use and criterion from a statement that the water needs to be fishable to a statement calling for a reproducing trout population. Then one or more criteria for measuring attainment of this designated use are described; these might include minimum dissolved oxygen or maximum suspended sediment requirements. Alternatively, an index to measure biological condition appropriate to the trout fishery designated use, such as an index of biological integrity (IBI), may be defined.

In the 1990s, TMDLs were undertaken for some waterbodies where the designated use was not attainable for reasons that could have been disposed of by a UAA. For example, TMDLs conducted in Louisiana resulted in the conclusion that even implementing zero discharge of a pollutant would not bring attainment of water quality standards (Houck, 1999). A properly conducted UAA would have revealed the true problem—naturally low dissolved oxygen concentrations—before the time and money were spent to develop the TMDL. Unfortunately, UAA has not been widely employed. Novotny et al. (1997) found that 19 states reported no experience with UAA. The majority of states reported a few to less than 100 UAAs, while five states (Indiana, Nebraska, New York, Oklahoma, and Pennsylvania) performed more than 100.

One possible explanation for the failure to widely employ UAA analysis is the absence of useful EPA guidelines. The last technical support manuals were issued in the early 1980s (EPA, 1983) and are limited to physical, chemical and biological analyses. It is presently not clear what technical information constitutes an adequate UAA for making a change to the use designation for a waterbody that will be approved by the EPA.

In addition to being a technical challenge, standards review also has important socioeconomic consequences (see point 6 in Box 5-1). EPA has provided little information on how to conduct socioeconomic analyses or how to incorporate such analyses in the UAA decision. The socioeconomic analysis suggested by EPA is limited to narrowly conceived financial affordability and economy-wide economic impact assessments (e.g., employment effects) (Novotny et al., 1997). However, when setting water quality standards, states may be asked to make decisions in consideration of a broader socioeconomic benefit–cost framework than

BOX 5-1

Six Reasons for Changing the Water Quality Standard

The following six situations, which can be revealed by UAA, constitute reasons for changing a designated use or a water quality standard (EPA, 1994). Conducting a UAA does not necessarily preclude the development of a TMDL.

1. Naturally occurring pollutant concentrations prevent attainment of the use.
2. Natural, ephemeral, intermittent or low flow water levels prevent the attainment of the use unless these conditions may be compensated for by a sufficient volume of effluent discharge without violating state conservation requirements to enable uses to be met.
3. Human-caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place (e.g., as with some legacy pollutants).
4. Dams, diversions, or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the waterbody to its original condition or to operate such modification in a way that would result in the attainment of the use.
5. Physical conditions related to the natural features of the waterbody, such as the lack of proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses.
6. Controls more stringent than those required by the CWA mandatory controls (Sections 301b and 306) would result in substantial and widespread adverse social and economic impact. This requires developing a TMDL and conducting a socioeconomic impact analysis of the resulting TMDL (Novotny et al., 1997).

what is currently expected in a UAA. Finally, EPA has offered no guidance on what constitutes an acceptable UAA in waterbodies of different complexity and on what decision criteria will be accepted as a basis for changing a use designation. This is significant because EPA retains the authority to approve state water quality standards. These uncertainties discourage state use of UAA because there is no assurance that EPA will accept the result of the UAA effort as an alternative to a TMDL, especially if the EPA expectation for a UAA will result in significant analytical costs.

Conclusions and Recommendations

1. **EPA should issue new guidance on UAA.** This should incorporate the following: (1) levels of detail required for UAAs for waterbodies of different size and complexity, (2) broadened socioeconomic evaluation and decision analysis guidelines for states to use during UAA, and (3) the relative responsibilities and authorities of the states and EPA in making use designations for specific waterbodies following a UAA analysis.

2. **UAA should be considered for all waterbodies before a TMDL plan is developed.** The UAA will assure that before extensive planning and implementation actions are taken, there is clarity about the uses to be secured and the associated criteria to measure use attainment. UAA is especially warranted if the water quality standards used for the assessment were not well stratified. However, the decision to do a UAA for any waterbody should rest with each state.

ADAPTIVE IMPLEMENTATION DESCRIBED

Once a waterbody is on the 303d list, a plan to secure the designated use is developed and a sequence of actions is implemented. The adaptive implementation process begins with initial actions that have a high degree of certainty associated with their water quality outcome. Future actions must be based on (1) continued monitoring of the waterbody to determine how it responds to the actions taken and (2) carefully designed experiments in the watershed. This concurrent process of action and learning is depicted in Figure 5-2.

The plan includes the following related elements: immediate actions, an array of possible long-term actions, success monitoring, and experimentation for model refinement. In choosing *immediate actions*, watershed stakeholders and the state should expect such actions to be undertaken within a fixed time period specified in the plan. If the impairment problem is attributable to a single cause or if the impairment is not severe, then the immediate actions might be proposed as the final solution to the nonattainment problem. However, in more challenging situations, the immediate actions alone should not be expected to completely eliminate the impairment.

Regardless of what immediate actions are taken, there may not be an immediate response in waterbody or biological condition. For example,

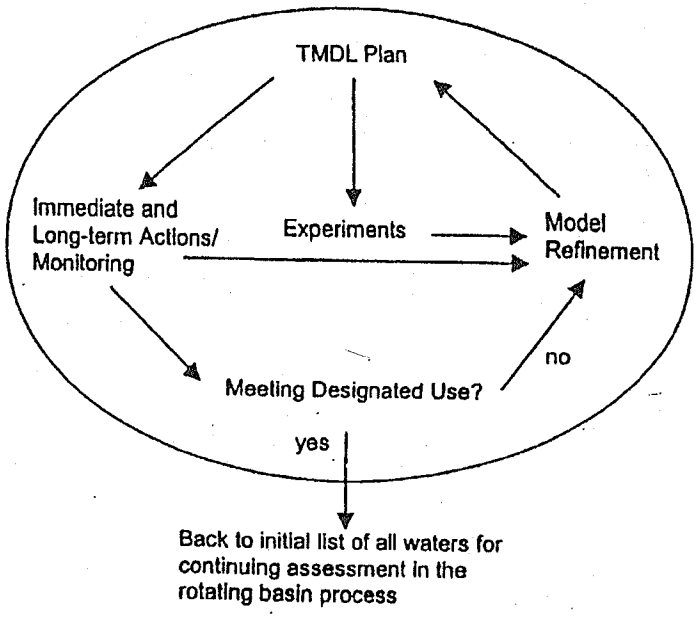

FIGURE 5-2 Adaptive implementation flowchart.

there may be significant time lags between when actions are taken to reduce nutrient loads and resulting changes in nutrient concentration. This is especially likely if nutrients from past activities are tightly boun. to sediments or if nutrient-contaminated groundwater has a long residence time before its release to surface water. For many reasons, lags between actions taken and responses must be expected. As discussed below, the waterbody should be monitored intensively to establish whether the "trajectory" of the measured water quality criterion points toward attainment of the designated use.

Longer-term actions are those that show promise, but need further evaluation and development. They should be formulated in recognition of emerging and innovative strategies for waterbody restoration. The commitment in the plan is to further evaluate such actions based on the collection of additional data, data analysis, and modeling. An adaptive implementation plan would specify analyses of specific long-term alter-

natives, a schedule for such analyses to be conducted, and a mechanism for supporting such analyses.

Success monitoring follows after implementation actions. If success monitoring shows that the waterbody is meeting water quality standards including designated uses, then no further implementation actions would be taken. Waterbodies should be returned to the "all waters" list (see Figure 5-1) where they will be monitored as a part of the rotating basin process. A primary purpose of success monitoring is to establish compliance with water quality standards and ultimately make the delisting decision. Because state ambient monitoring programs typically have limited resources, it may be necessary to design and implement success monitoring for the TMDL program outside the rotating basin process. Those stakeholders affected by 303d listing and TMDL development may have an incentive to make a significant contribution to the monitoring effort to assure that the water is truly impaired and that the best possible models are being used for plan development. Stakeholder monitoring would be conducted with input on its design by the state.

One of the most important applications of success monitoring data is to revise and improve the initial TMDL forecast over time. This revision of the TMDL model can be formally accomplished using techniques such as Bayesian analysis, data assimilation, or Kalman filtering. For example, a TMDL for total phosphorus, based on a model forecast that included uncertainty analysis, might be implemented to address a chlorophyll *a* standard violation. As part of the implementation program, monitoring would be undertaken to assess success and compliance. At the end of the five-year rotating basin cycle, the original chlorophyll *a* forecast could be combined with the monitoring-based chlorophyll *a* time trajectory to yield a revised forecast of ultimate chlorophyll *a* response. This revised forecast could provide the basis for changes to be implemented during the next five-year cycle in order to meet the water quality standard.

Techniques to accomplish model refinement have existed for some time in a Bayesian context (Reckhow, 1985), and under various labels and modifications, they are being applied in other areas. For example, "data assimilation" (Robinson and Lermusiaux, 2000), a derivative of Bayesian inference, is being widely used in the earth sciences to augment uncertain model forecasts with observations. The Bayesian approach holds particular appeal for adaptive TMDLs because it involves "knowledge updating" that is based on pooling precision-weighted information.

The need for *experimentation* to be part of the plan depends on the complexity of the problem and the need to learn more about the system

for subsequent model refinement and decision-making. Experiments can, for example, be developed to test the site-specific effectiveness and response time of best management practices (BMPs) (like riparian buffers), to determine the fate and transport of pollutants in runoff, or to answer other questions critical to model refinement. Experiments must be carefully designed and adequately supported (with both funding and staff) to study the effectiveness of actions in the watershed context and to study and learn about watershed processes that are not well understood. TMDL plans for waterbodies with relatively simple problems that can be addressed with high certainty about cause and effect might not include experimentation.

All the actions described above can be used to refine the origin. TMDL plan so that it better reflects the current state of knowledge about the system and innovative modeling approaches. When revising the TMDL plan, water managers should consider whether the longer-term actions discussed above, or other new alternatives, should be implemented in addition to the immediate actions called for in the original plan. TMDL plans for complicated systems (e.g., a reservoir impacted by multiple nonpoint sources of pollution) can be expected to undergo more revisions before water quality standards (including designated uses) are met than will TMDL plans developed for simple systems.

TMDL IMPLEMENTATION CHALLENGES

Allocation Issues

Plan implementation involves actions taken to reduce all the stressors responsible for the impairment. The allocation of financial and legal responsibility for taking those actions will fall on stakeholders in the watershed, who may not receive public subsidies for taking such actions. Because of these cost consequences, stakeholders want to be sure that water quality standards are appropriate and that total load limits and the limits proposed on other stressors (e.g., flow modifications) are necessary to secure the designated use.

The committee's charge included a request to evaluate the reliability of "the information required to allocate reductions in pollutant loadings among sources." Allocation is *first and foremost a policy decision* on how to distribute costs among different stakeholders in order to achieve a water quality goal. Consider a hypothetical example where three differ-

ent actions are possible: reduction of pollutant loads from a treatment plant, reductions in pollutant load in runoff from urban areas and farm fields, and increases in stream flow from reduced consumptive irrigation water use. Also suppose that different combinations of all of these actions can achieve the designated use. Allocation becomes a difficult decision because the different combinations will have a different total cost and different levels of perceived fairness. One suggestion might be to choose the combination of actions that minimizes total cost. However, this may result in a cost distribution that places most of the burden on the customers of the treatment plant (for example). An alternative may be to reduce loads from the plants and from runoff by the same proportion; however, this leaves unanswered whether any cost responsibility should fall on the irrigators. Other combinations of actions would have other cost distribution effects.

Although the allocation process is primarily a policy decision, there is one important role that science can play—determining when actions are "equivalent." Water quality management actions are defined to be "equivalent" when their implementation achieves the designated use, taking uncertainty into consideration. Note that there are two aspects of this definition of equivalency. First, equivalency is established with respect to ambient outcomes for the watershed and not in terms of pollutant loading comparisons, which is the way the allocations are described in the standard TMDL equation. Second, the definition recognizes that equivalency must account for the relative uncertainty of different actions with respect to meeting the applicable water quality standard.

One common scenario might be the need to establish equivalency between nitrogen load reductions from a proposed agricultural BMP vs. a proposed wastewater treatment plant improvement. Estimates of the effectiveness of the BMP and wastewater treatment technology can be made in a controlled setting, perhaps with field studies of the BMP and with experiments at the treatment plant. To achieve equivalency, these load reductions must have the same effect on meeting the water quality standard, which would normally be determined using a modeling approach as described in Chapter 4. It is quite possible that the nitrogen load reductions at the sources (the agricultural BMP and the wastewater treatment plant) are different, but they are equivalent in that they are predicted to have an identical effect on the standard. Further, as noted above, equivalency is a function of both the forecasted mean and forecast uncertainty. Thus, if the BMP and wastewater treatment improvement are both forecast to have the same mean effect on the water quality standard, but the wastewater treatment improvement response has less uncertainty, then the actions are not equivalent.

Determining equivalency across sources requires predicting or measuring the results of control actions, rather than simply noting the presence or absence of a particular control technology (the results of which may vary depending on how it is operated and on many other factors). Careful thought must be given to determining meaningful results, especially in those watersheds where actions like flow augmentation or planting of oysters in an estuary are being used as substitutes for, or necessary complements to, load reduction to meet the designated use.

Finally, because it should be focused on water quality outcomes, allocation is dependent on modeling the effects of different actions on waterbody response. Thus, the issues of model selection and uncertainty that were described in Chapter 4 for TMDL development also apply to TMDL allocation. If there is uncertainty about the effect of certain control actions, those who bear the costs may resist taking such actions without further evidence of their worth. Adaptive implementation would support a cautious approach of taking low-cost actions with a high degree of certainty about the outcome, while taking parallel longer-term actions to improve model capabilities and revise control strategies.

Progressing Toward Adaptive Implementation

The TMDL program is limited by an incomplete conceptual understanding of waterbodies and watersheds, by models that are necessarily abstractions from the reality of natural systems, and by limited data for testing hypotheses and/or simulating systems. As a result, it is possible for a waterbody to be identified as impaired when it is not; in such cases, the costs to plan and implement control actions are wasted. On the other hand, it is also possible that an impaired waterbody will not be identified, resulting in other adverse consequences. Many of the stakeholders who addressed the committee expressed concern about the ramifications of uncertainty in the TMDL process. Some cautioned against listing errors, noting that the listing decision can trigger a linear and inflexible process of potentially expensive controls on land use and pollutant discharges that may ultimately prove unwarranted. Others who are concerned that impaired waterbodies will go unidentified advocated more aggressive and comprehensive actions to address problems quickly. These differences in viewpoint can be traced to the policy context that

now governs the TMDL program. The committee views adaptive implementation as accommodating this spectrum of opinions.

If adaptive implementation is to be adopted, three policy issues that stand in the way of acceptance of the approach must be addressed. These issues are described without specific recommendations on their solution, except to note that their resolution is needed in order for the TMDL program to fully embrace the scientific method. Criticism of the TMDL program is too often, and sometimes inappropriately, directed at the quality of the data and information, rather than at these underlying policy issues.

1. The listing of a waterbody and the initiation of the TMDL process appear to call for a constraint on total pollutant loading associated with population growth and land use shifts until the designated use is obtained. Given the often weak water quality standards that underlie a listing, the long lag times between actions taken and measured responses, and the uncertainty in our ability to predict what actions will secure a designated use, it is unrealistic to expect that there will be no changes in economic activity and in land uses in a watershed until the designated use has been achieved. A basis for accommodating growth and change in watersheds needs to be established as adaptive implementation proceeds.

2. Many waterbody stressors currently lie outside the CWA regulatory framework, where the only federal enforcement tool available is point source discharge limits. Recognition of this fact was a motivation for EPA's endorsement of the watershed approach in 1991 (EPA, 1993). Nonetheless, in some cases point source permitting is used to impose conditions on point sources that essentially require them to finance control practices for unregulated nonpoint sources (NAPA, 2000). Perceptions of the inequity and the ineffectiveness of such a requirement may be manifested as technical critiques of the TMDL analysis itself. Distributing the cost and regulatory burdens for designated use attainment in a way that is deemed equitable by all stakeholders is critical to future TMDL program success.

3. Watersheds can range in size from a few acres to an area that covers several states, and their diversity can be as far reaching as the diverse climate, soils, topography, and physiography of the entire United States. Consequently, the approaches and solutions to water quality problems must be responsive to the unique characteristics of the surrounding watershed. EPA can set broad guidelines for each state's water quality program and can provide technical assistance in helping

states meet the guidelines. There may be a leadership role for EPA on waterbodies that cross state boundaries, like the Chesapeake Bay. However, EPA cannot write and review all the designated uses that will apply to each of the nation's waterbodies, it cannot conduct all the monitoring and make all the listing decisions, and it cannot conduct the model analyses for all waterbodies. The scientific foundation for adaptive implementation must rely on state initiative and leadership. Today, EPA retains an extensive oversight role for the TMDL program. This raises the possibility that in an effort to ease the administrative burdens of reviewing and approving every TMDL, EPA will establish requirements for uniformity. This may result in standard setting listing/delisting, and modeling approaches that are nationally consiste but are scientifically inappropriate for the planning and decision-making needs of the diversity of waterbodies. In the National Pollution Discharge Elimination System (NPDES) permitting program, EPA has helped states assume responsibility for point source permitting such that EPA does not review every permit that is issued. Using similar logic, EPA need not review every TMDL. The concern that the states cannot be relied upon to take action (Houck, 1999) needs to be tempered by the reality that continued extensive EPA oversight may not be feasible, it may place a premium on developing plans instead of taking actions, and it may inhibit the nation's progress toward improved water quality. The adaptive implementation approach may require increased state assumption of responsibility for individual TMDLs, with EPA oversight focused at the program level instead of on each individual water segment.

Conclusions and Recommendations

The call for adaptive implementation may not satisfy those who seek more definitive direction from the scientific community. Stakeholders and responsible agencies seek assurance that the actions they take will prove correct; they desire predictions of the costs and consequences of those actions in as precise terms as possible. However, waterbodies exist inside watersheds that are subject to constant change. For this reason and others, even the best predictive capabilities of science cannot assure that an action leading to attainment of designated uses will be initially identified. Adaptive implementation will allow the TMDL program to move forward in the face of these uncertainties.

1. EPA should act (via an administrative rule) to incorporate the elements of adaptive implementation into TMDL guidelines and regulations. To increase the scientific foundation of the TMDL program, the scientific method, which is embodied by the adaptive implementation approach, must be applied to water quality planning.

2. If Congress and EPA want to improve the scientific basis of the TMDL program, then the policy barriers that currently inhibit adoption of an adaptive implementation approach to the TMDL program should be addressed. This includes the issues of future growth, the equitable distribution of cost and responsibility among sources of pollution, and EPA oversight.

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Appendix A
Guest Presentations at the First Meeting of the NRC Committee[1] January 24–26, 2001

Introduction to the TMDL Program: Current Status and Future Plans
Don Brady, EPA Office of Water

Congressional Request for the Study—Senate
John Pemberton and Peter Washburn, Senate Committee on Environment and Public Works

Congressional Request for the Study—House
Susan Bodine, House Subcommittee on Water Resources and Environment

March 2000 GAO Report on Status of Water Quality Data
Patricia McClure, General Accounting Office

Environmental Perspective on the TMDL Program and this Study
Nina Bell, Northwest Environmental Advocates

State Perspectives on the TMDL Program and this Study
Robbi Savage, Association of State and Interstate Water Pollution Control Administrators
Shawn McGrath, Western Governors' Association

EPA's Pressing Science Issues for the TMDL Program
Lee Mulkey and Tom Barnwell, EPA Office of Research and Development

TMDL Case Studies
Bruce Zander, EPA Region VIII
Gail Mitchell, Bob Ambrose, and Tim Wool, EPA Region IV

[1] The NRC committee does not necessarily agree with all the comments or testimony given but all were taken into account.

Water Environment Research Foundation Support of TMDL Research
Dean Carpenter, Water Environment Research Foundation
Paul Freedman, Limno-Tech, Inc.
Kent Thornton, FTN & Associates

Stakeholder Presentations
Fred Andes, Federal Water Quality Coalition
Doug Barton, National Council of the Paper Industry for Air and Stream Improvement
Richard Bozek, Edison Electric Institute
Faith Burns, National Cattleman's Association
John Cowan, National Milk Producers Federation
Cynthia Goldberg, Gulf Restoration Network
Jay Jensen, National Association of State Foresters
Norman LeBlanc, Association of Metropolitan Sewerage Agencies
Mike Murray, National Wildlife Federation
Rick Parrish, Southern Environmental Law Center
Rob Reash, American Electric Power and the Utility Water Act Group
Dave Salmonsen, American Farm Bureau Federation

Appendix B
Biographies of the Committee Members and NRC Staff

Kenneth H. Reckhow (chair) is a professor at Duke University wi. faculty appointments in the School of the Environment and the Department of Civil and Environmental Engineering. In addition, he is director of The University of North Carolina Water Resources Research Institute and an adjunct professor in the Department of Civil Engineering at North Carolina State University. He currently serves as president of the National Institutes for Water Resources and is chair of the North Carolina Sedimentation Control Commission. He has published two books and over 80 papers, principally on water quality modeling, monitoring, and pollutant loading analysis. In addition, Dr. Reckhow has taught several short courses on water quality modeling and monitoring design, and he has written eight technical guidance manuals on water quality modeling. He is currently serving, or has previously served, on the editorial boards of *Water Resources Research, Water Resources Bulletin, Lake and Reservoir Management, Journal of Environmental Statistics, Urban Ecosystems, and Risk Analysis.* He received a B.S. in engineering physic from Cornell University in 1971 and a Ph.D. from Harvard University . environmental systems analysis in 1977. Dr. Reckhow is currently a member of the NRC's Committee to Improve the USGS National Water Quality Assessment Program.

Anthony S. Donigian, Jr., is president and principal engineer for AQUA TERRA Consultants. His expertise is in watershed modeling; nonpoint pollution and water quality modeling; chemical fate, transport, and exposure assessment; and model validation and testing. Mr. Donigian has 30 years of a broad range of experience in the development, testing, and application of modern analytical techniques for the assessment of environmental contamination and water resources planning problems. He is an internationally recognized authority on modeling nonpoint pol-

lution and chemical migration in the environment, primarily for water, soil, and groundwater systems. His recent research and applications studies have concentrated on regional and watershed-scale modeling of nutrients and impacts of management practices, movement of contaminants through the vadose zone, groundwater contamination by pesticides and hazardous wastes, model validation issues and procedures, and the evaluation of control alternatives such as best management practices, conservation tillage, and remedial actions at waste sites. Mr. Donigian received an A.B. in engineering sciences and a B.S. in engineering from Dartmouth College and an M.S. in civil engineering from Stanford University.

James R. Karr is a professor of aquatic sciences and zoology and an adjunct professor of environmental engineering, environmental health, and public affairs at the University of Washington, Seattle. He was on the faculties of Purdue University, University of Illinois, and Virginia Polytechnic Institute and State University; he was also deputy director and acting director at the Smithsonian Tropical Research Institute in Panama. He has taught and done research in tropical forest ecology, ornithology, stream ecology, watershed management, landscape ecology, conservation biology, ecological health, and science and environmental policy. He is a fellow in the American Association for the Advancement of Science and the American Ornithologists' Union. Dr. Karr has served on the editorial boards of *BioScience, Conservation Biology, Ecological Applications, Ecological Monographs, Ecology, Ecosystem Health, Freshwater Biology, Ecological Indicators,* and *Tropical Ecology.* He developed the index of biotic integrity (IBI) to directly evaluate the effects of human actions on the health of living systems. Dr. Karr holds a B.S. in fish and wildlife biology from Iowa State University and an M.S. and Ph.D. in zoology from the University of Illinois, Urbana-Champaign.

Jan Mandrup-Poulsen is an environmental administrator with the Watershed Assessment Section of the Florida Department of Environmental Protection. He is responsible for evaluating surface water quality, surface water/groundwater interactions, and mixing zones, and for determining the Total Maximum Daily Loads (TMDLs) allowable to support designated uses. He has coauthored materials on nonpoint source regulation in Florida and permitting guidance documents for point source discharges in Florida with consideration of the TMDL program. He is a frequent speaker on the topics related to the Florida Department of Environmental Protection watershed management approach, TMDLs, and the

Impaired Waters Rule. Mr. Mandrup-Poulsen received his B.S. in atmospheric and oceanic science from the University of Michigan and his M.S. in biological oceanography and M.B.A. from Florida State University.

H. Stephen McDonald is a principal with Carollo Engineers. He has 22 years of experience in the areas of wastewater planning, watershed management, wastewater disinfection, biosolids treatment/reuse/disposal, and chemical and biological wastewater treatment/reuse. He is currently project manager for the development of TMDLs for several watersheds, including the Truckee River from Lake Tahoe to Pyramid Lake and the Calleguas Watershed in California. For the Truckee River he is developing the Coordinated Monitoring Program and an adaptive management watershed/water quality modeling and stakeholder process to establish TMDLs for nutrients (nitrogen and phosphorus) and total dissolved solids (TDS). Mr. McDonald has developed master plans for water and wastewater treatment facilities in many western regions, including Sacramento County, the city of Fresno, CA; and the cities of Reno, Sparks, and Washoe County, NV. He holds a B.S. in biology from Portland State University and a B.S. in chemical engineering from Oregon State University. He has an MBA from California State University in Hayward and is a registered professional engineer in California.

Vladimir Novotny is a professor of environmental and water resources engineering at Marquette University and director of the Institute for Urban Environmental Risk Management. He is also president of the consulting firm Aqua Nova International, Ltd. His research has included risk-based urban watershed management integrating water quality and flood-control objectives, development of an adaptive methodology for online computerized modeling and real-time control of wastewater treatment facilities, and development of algorithms for control of urban sewer systems. He developed nationwide manuals on attainment of water quality goals (use attainability analysis) and abatement of winter diffuse pollution by road deicing operations. He is a past chair of an international group of specialists dealing with diffuse pollution and watershed management with the International Water Association. Dr. Novotny received a diploma engineer degree in sanitary engineering and a candidate of science degree in sanitary and water resources from the Technical University of Brno, Czechoslovakia and a Ph.D. in environmental engineering from Vanderbilt University.

Richard A. Smith joined the Water Resources Division of the U. S. Geological Survey (USGS) in 1975 and began working with a small research team on statistical methods in water quality and their applications to the extensive and diverse water quality monitoring records maintained by the USGS. Throughout the 1980s, his research dealt with patterns of change in the nation's water quality and with statistical analysis of data collected from the more than 400 stream and river monitoring stations in the Survey's NASQAN program. In the early 1990s he began to investigate the possibility of using the rapidly advancing technology of GIS to enable the use of monitoring data in making statistically based predictions of water quality in unmonitored waters. For more than a decade he has also been very interested in the question of the adequacy of the nation's monitoring programs. He recently served on a panel of scientists charged with making recommendations for a comprehensive monitoring plan for the drinking-water supply watersheds serving New York City. Dr. Smith received his B.S. and M.S. in biology from the University of Richmond and his Ph.D. in environmental engineering from Johns Hopkins University.

Chris O. Yoder is manager of the Ecological Assessment Section of the State of Ohio Environmental Protection Agency. His current responsibilities include ecological evaluation of Ohio's surface water resources including streams, rivers, lakes, and wetlands; development of ambient biological, physical, and chemical assessment methods, indicators, and criteria for rivers, streams, inland lakes, wetlands, Lake Erie, and the Ohio River; reporting on the condition of Ohio surface water resources on a local, regional, and statewide scale; and development of environmental indicators for the surface water program. Previously he was a principal investigator of a cooperative agreement with the U.S. EPA Office of Water for developing approaches to implementing bioassessments and biological criteria within state and federal water quality management programs. Mr. Yoder received a B.S. in agriculture from Ohio State University and his M.A. in zoology from DePauw University.

NRC Staff

Leonard Shabman is a professor in the Department of Agricultural and Applied Economics at the Virginia Polytechnic Institute and State University and director of the Virginia Water Resources Research Center. He earned his Ph.D. in resource and environmental economics from

Cornell University. His research interests include water supply, water quality, and flood hazard management; fishery management; and the role of economists in public policy formulation. Dr. Shabman was a member of the NRC's Committee on Watershed Management, Committee on USGS Water Resources Research, Committee on Flood Control Alternatives in the American River Basin, and the Committee on Restoration of Aquatic Ecosystems: Science, Technology, and Public Policy.

Laura J. Ehlers is a senior staff officer for the Water Science and Technology Board of the National Research Council. Since joining the NRC in 1997, she has served as study director for seven committees, including the Committee to Review the New York City Watershed Management Strategy, the Committee on Riparian Zone Functioning and Strategies for Management, and the Committee on Bioavailability of Contaminants in Soils and Sediment. She received her B.S. from the California Institute of Technology, majoring in biology and engineering and applied science. She earned both an M.S.E. and a Ph.D. in environmental engineering at the Johns Hopkins University. Her dissertation, entitled RP4 Plasmid Transfer Among Strains of *Pseudomonas* in a Biofilm, was awarded the 1998 Parsons Engineering/Association of Environmental Engineering Professors award for best doctoral thesis.

EXHIBIT "5"

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of the Petition of NATURAL RESOURCES DEFENSE COUNCIL, INC. For Review of Waste Discharge Requirements Order No. 90-079 of the California Regional Water Quality Control Board, Los Angeles Region for Los Angeles County and Co-Permittees. NPDES Permit No. CA0061654. Our File No. A-693.	ORDER NO. WQ 91-04

BY THE BOARD:

On July 18, 1990, the State Water Resources Control Board (State Board) received a petition from Natural Resources Defense Council, Inc. (petitioner), seeking review of waste discharge requirements which the California Regional Water Quality Control Board, Los Angeles Region (Regional Board) adopted in Order No. 90-079, regulating discharges of storm water from municipal separate storm sewers throughout Los Angeles County.

Many of the issues raised by the petitioner are discussed in great detail in Order No. WQ 91-03, which we are also issuing today, and which concerns a permit issued by the Regional Water Quality Control Board, San Francisco Bay Region (San Francisco Bay Regional Board) regulating discharges of storm water from municipalities in the Santa Clara Valley. Given the similarity of these issues, we will discuss most of the

petitioner's contentions in only a summary manner, and will refer to our determinations in Order No. WQ 91-03.[1] In adopting that Order, we did consider the petitioner's arguments, and also those of the Regional Board, the dischargers, and interested persons.

I. BACKGROUND

As we discussed in Order No. WQ 91-03, over the last twenty years, the Environmental Protection Agency (EPA), has developed a program to regulate discharges of storm water and urban runoff through the National Pollutant Discharge Elimination System (NPDES) of permits. The requirements for this program are contained in Clean Water Act Section 402(p). In this case, as in the case of the San Francisco Bay Regional Board, the Regional Board adopted its permit regulating discharges from municipal separate storm sewer systems prior to EPA's promulgation of regulations implementing Section 402(p).

As did the San Francisco Bay Regional Board, the Los Angeles Regional Board also proceeded to take earlier steps to study and control storm water discharges while EPA's program development was delayed. In 1975, the Regional Board adopted its Water Quality Control Plan (Basin Plan).[2] The Basin Plan characterized constituents commonly found in runoff and roughly estimated runoff wasteloads through the Los Angeles River and

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1 A major portion of our other Order involved discussion of Clean Water Act Section 304(l). That section does not apply here. However, the discussion concerning the regulations which EPA adopted to implement Section 304(l), i.e. 40 CFR Section 122.44(d), is also relevant to this matter.

2 Water Quality Plan Report, Santa Clara River Basin (4A) and Los Angeles River Basin (4B) (March 1975). The Basin Plan was approved by the State Board in Resolution No. 75-21.

Santa Clara River sub-basins.[3] The Basin Plan also compared local runoff data with the results of several investigations conducted elsewhere in the nation.

The Basin Plan identified beneficial uses of the surface waters within the region, established water quality objectives to protect and enhance these uses, and described a detailed "Implementation Plan" to achieve those objectives. The beneficial uses of the surfaces waters typically include ground water recharge (replenishment), contact and non-contact recreation and wildlife habitat.[4] A few creeks also support warm and cold water habitat, fish migration and fish spawning uses. Some reservoirs also provide municipal, industrial supply and industrial process water uses.[5] Rare and endangered habitat and agricultural supply were identified as existing beneficial uses of several surface waters also.[6] The Basin Plan listed marine habitat, contact and non-contact recreation, commercial and sport fishing, navigation, and shellfish harvesting as the beneficial uses of the Pacific Ocean.

The Basin Plan also established water quality objectives. First, it referred to several state policies for water quality control and statewide plans. These include the "Water Quality Control Policy for the Enclosed Bays and Estuaries

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3 The 1975 Basin Plan divided its region into two sub-basins: the Santa Clara River Basin ("4A") and the Los Angeles River Basin ("4B").

4 1975 Basin Plan, Table 2-3.

5 Id.

6 Id.

of California"[7] and the "Water Quality Control Plan for Ocean Waters of California".[8] The Basin Plan stated that the Ocean Plan and the Bays and Estuaries Policies established effluent quality requirements for certain discharges. "Land runoff", however, was specifically excluded from the effluent requirements.[9]

The receiving water quality objectives set forth in the Basin Plan included several general requirements and narrative objectives. For inland surface waters, enclosed bays, and estuaries in the Los Angeles River sub-basin, narrative receiving water quality objectives were specified for tastes and odors, floating material, suspended material, settleable material, oil and grease, sediment, turbidity, bacteria, and several other pollutants.[10] The narrative toxicity objective required that all waters be maintained free of "toxic substances in concentrations that are toxic to, or produce detrimental physiological responses in human, plant, animal, or aquatic life."[11] The Basin Plan

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7 The "Bays and Estuaries Policy", as this document is know, was adopted on May 16, 1974.

8 The State Board first adopted this plan, commonly known as the "Ocean Plan", on July 6, 1972. The State Board approved amendments to the Ocean Plan on March 22, 1990 by Resolution No. 90-27.

9 The 1975 Basin Plan states:

> *"This policy does not apply to wastes from vessels or land runoff except as specifically indicated for siltation and combined sewer flows." See page I-4-5.*

10 1975 Basin Plan, pages I-4-6 through I-4-8.

11 Ibid., at page I-4-8.

further specified "limiting concentrations" for inorganic chemical constituents (primarily heavy metals) in waters used as domestic and municipal supply.[12] It also prescribed "mean mineral quality objectives" for the Los Angeles River, the San Gabriel River and their "tributaries".[13]

The Basin Plan also contained an "Implementation Plan" to reduce wasteloads from various pollutant sources and their effects on the basin's waters. For urban runoff and storm water discharges, the Basin Plan indicated that the pollutants found in runoff discharges varied considerably and exhibited a seasonal nature. More specifically, the Plan stated that the "bulk of these mass emissions is normally experienced in only a few days of wet weather during the rainy season."[14] Although certain beneficial uses, such as groundwater recharge and recreational uses, may be temporarily impaired during storm flow conditions, the Basin Plan noted few traditional "end-of-pipe" controls existed for runoff flows. It explained:

> "...there is little, if anything, that can be done to mitigate the effects of such runoff except for improved air pollution control practices, improved urban housekeeping, and improved environmental levels of performance for automotive equipment."[15]

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12 *Ibid., at page I-4-9.*

13 *Ibid., at Table 4-1 and pages 1-4-11 and I-4-12.*

14 *1975 Basin Plan, "Impact of Runoff Waste Loads", page II-15-94.*

15 *Id.*

Although much runoff data was included in the Basin Plan, limited information about the significance or effects of runoff discharges on receiving water quality existed.

The Basin Plan specified requirements and controls for "traditional" point sources,[16] but storm water discharges were not covered, based on the difficulty of their regulation:

> "...no practical and economical means has yet been developed for containment and treatment of urban runoff wastes for reduction of pollutants prior to downstream release, nor are standards for such measures presently in existence or contemplated for the foreseeable future, at least on a widespread basis....There are presently no generally applicable effluent limits nor water pollution control facilities in connection with urban runoff that appear practical or economical. The emphasis for water quality control from this standpoint should be public education, public cooperation in improved (outdoor) housekeeping, and continued search of solutions to the air pollution problems."[17] (Emphasis added)

The Regional Board has not amended the portions of its Basin Plan relating to storm water and urban runoff since 1975. Therefore, we conclude that the Basin Plan does not address controls on such discharges, except for the few practices listed above. Clearly, the effluent limitations listed for other point sources are not meant to apply. In addition, there are no

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16 As was explained in Order No. WQ 91-03, throughout the years many documents have treated storm water discharge as a nonpoint source, even though it is legally a point source. This has led to some confusion in terminology. However, it is often obvious from statements in the document that decision makers have sought to exclude storm water from requirements otherwise applicable to point sources.

17 Ibid., at pages I-5-87 and I-5-88.

numeric water quality standards which have yet been developed.[18] On April 11, 1991, the State Board adopted the Water Quality Control Plan for Inland Surface Waters (Inland Plan) which is applicable here. The Inland Plan establishes numeric water quality objectives but allows dischargers of storm water a maximum of ten years to achieve compliance.

As was discussed in Order No. WQ 91-03, in 1987 the federal Clean Water Act was amended[19] to add provisions specifically requiring a regulatory program for storm water discharges. Section 402 of the Clean Water Act was amended to add subsection 402(p), which establishes NPDES permit application requirements for municipal storm water discharges and for storm water discharges associated with industrial activities.[20]

Section 402(p) includes the following requirements for municipal discharges of storm water:

> "Permits for discharges from municipal storm sewers--(i) may be issued on a system- or jurisdiction-wide basis; (ii) shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers; and (iii) shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the [EPA] Administrator or the State determines appropriate for the control of such pollutants." (Emphasis added.)

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18 The petitioner contends that numerical objectives contained in the Ocean Plan apply to discharges of storm water. We shall discuss that contention infra.

19 The amendments are entitled, Water Quality Act of 1987, Public Law 100-4 (February 4, 1987).

20 Section 405(p) of the Water Quality Act of 1987.

The Water Quality Act of 1987 also added Section 320 to the Clean Water Act. This amendment created the National Estuaries Program, an effort to develop and implement comprehensive conservation and management plans for estuaries of national importance. In December 1987, a federal appropriations act formally included Santa Monica Bay in EPA's National Estuaries Program.[21] The State of California then organized the Santa Monica Bay Restoration Project to coordinate local, state, and federal activities to develop the required plan which would improve the condition of Santa Monica Bay. The nomination document for this project indicated that urban runoff and storm water discharges may contain heavy metals, organic constituents, pathogens, and other pollutants that threaten or may impair the beneficial uses of Santa Monica Bay.[22] As a part of this project, the Los Angeles Regional Board--and the numerous local and regional governments and environmental interest groups that also participate in the project--began a more thorough investigation of runoff discharges to Santa Monica Bay. Because existing runoff data was incomplete or inconsistent, the Santa Monica Bay Restoration Project initiated detailed monitoring studies to identify pollutants in runoff flow, especially pathogens, and to assess their effects on the bay. This monitoring work is now in progress.

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21 National Estuary Program, The Nomination of Santa Monica Bay, Environmental Affairs Agency, May 1988.

22 Ibid., see "Executive Summary", page viii, and "Storm Drains and Runoff", page 41.

The permit which we are reviewing here was the result of a cooperative effort of the "Storm Water Permit Work Group," which was established to fulfill part of the objectives of the Santa Monica Bay Restoration Project. The Work Group assisted in drafting the permit.

In order to implement the Basin Plan, the provisions of state law regarding adoption of waste discharge requirements,[23] and the Clean Water Act provisions regarding storm water permits, the Regional Board issued a draft NPDES permit to regulate urban runoff and storm water discharged throughout Los Angeles County. The revised draft permit designated the County of Los Angeles as the "Principal Permittee" and 16 cities as "Co-permittees" (the dischargers). A workshop was held by the Regional Board on April 23, 1990, and a public hearing was held on June 18, 1990, and on the latter date the Regional Board adopted the NPDES permit (NPDES permit CA-0061654; Regional Board Order No. 90-079). Subsequently, the petitioner filed a timely petition for review of the NPDES permit.

II. CONTENTIONS AND FINDINGS

The petition raises a number of contentions which all address whether the permit must include numeric, water quality-based effluent limitations. The petitioner argues that the Clean Water Act requires permits regulating municipal discharges of storm water to prescribe numeric effluent limitations for toxic pollutants. The petitioner also contends that the permit does

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23 California Water Code Section 13000 et seq.

not require controls which reduce pollutants to the "maximum extent practicable". Finally, the petitioner argues that the permit does not comply with the three-year time schedule required in Clean Water Act Section 402(p).

A. The Need for Numeric Effluent Limitations

The petitioners' arguments are based on the premise that the dischargers' municipal separate storm sewer system discharges pollutants to Santa Monica Bay, and that these discharges violate numeric water quality standards in the bay. The numeric standards which the petitioner relies upon are found in the Ocean Plan. As we shall explain, the petitioner's broad assertions vastly oversimplify the complex nature of the dischargers' flood control and drainage facilities, imply that the storm sewer system discharges only into Santa Monica Bay, and misconstrue ambient water quality criteria, receiving water quality standards and effluent limitations.

The County of Los Angeles, Department of Public Works' municipal separate storm sewer system serves a geographic area greater than 4,000 square miles[24] and includes more than 87 overlapping local governmental jurisdictions. This system, a vast network of catchments, street gutters, conduits, pipes, and channels that were designed for drainage and flood control purposes, collects urban runoff flows and storm water flows from throughout Los Angeles County. The County's Department of Public Works and 87 cities own, operate, or maintain this enormous

24 *See Regional Board's Response to Petition, page 10.*

municipal separate storm sewer system. More than 5,000 outfalls or "point sources" discharge these runoff flows into both constructed works and the natural streams, rivers, and other surface water bodies that comprise the Los Angeles River hydrologic unit.

As we discussed in Order No. WQ 91-03, the specific location at which the storm water outfall intersects receiving waters is where the "point source" discharge occurs. While the precise location of each of the several thousand outfalls in Los Angeles County is understandably omitted from the record, the substantial majority of these outfalls discharge urban runoff and storm water flows to surface waters--such as Ballona Creek, Coyote Creek, and San Antonia Creek, the Los Angeles River and the San Gabriel River, Rio Hondo, and other water bodies--throughout the hydrologic basin.[25]

Obviously, not all of the dischargers' 5,000 municipal separate storm sewer system outfalls actually discharge directly to Santa Monica Bay. Although the numerous natural water courses which receive storm water generally are ultimately tributary to Santa Monica Bay, they are the receiving waters. As such, these natural water courses cannot be considered elements of the dischargers' municipal separate storm sewer system. In fact, many of these surface waters are clearly identified in the Los Angeles Regional Board's Basin Plan.

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25 The nomination document for the Santa Monica Bay Restoration Project stated that "over 60 storm drains" empty into the Bay.

In the Los Angeles Basin, the storm sewer outfalls generally discharge to the water courses upstream from Santa Monica Bay. Both Santa Monica Bay and the water courses which receive the storm water discharges have beneficial uses. However, the uses of the streams, creeks, reservoirs and rivers in the Los Angeles River Basin are not the same as the uses of Santa Monica Bay. The upstream waters support fresh water uses, while Santa Monica Bay sustains marine water uses.

As was described above, while the Basin Plan does include narrative water quality objectives for the upstream surface waters, the Regional Board has not yet developed numeric objectives for all of the pollutants the petitioner enumerates. Although the Inland Plan does contain numeric objectives, up to ten years is allowed for compliance. The Ocean Plan also includes numeric standards, but these do not apply to discharges of storm water.

The Ocean Plan states that all parts are applicable to point source discharges to the ocean. Narrative water quality objectives and toxic materials limitations (Table B) do apply to nonpoint sources, but compliance is determined by direct measurement in receiving waters. The petitioner requests that the storm water discharges be subject to Table B, and also to Table A (which is meant only to apply to publicly-owned treatment works).

While on its face, Table B may appear to apply to storm water discharges, it is clear from reading the Functional

Equivalent Document,[26] which was adopted by the State Board at the same time as the Ocean Plan, that neither Table A nor Table B are meant to apply to storm water discharges:

> "The attainability analysis did not include stormwater discharges because there are few data available on pollutant concentrations in stormdrains. EPA's proposed regulations for stormwater discharges do not use water quality-based effluent limits for stormdrains.[27] Instead, an approach based on Best Management Practices is proposed, following an initial period of characterization.
>
> "We do not propose to apply water quality-based effluent limits such as Table B to stormdrains at this time. Technology-based standards will not be based on Table A, but on Best Management Practices. Since the Table B objectives represent levels of pollutants that are protective of beneficial uses they may be applied to stormdrains at some future date. We do not anticipate that this would occur until adequate characterization data are available so that attainability can be assessed and implementation measures established."

Following the above statement, the Functional Equivalent Document states that the Plan explains how to apply Table B objectives to nonpoint sources. From this statement, it is clear that in drafting the Ocean Plan the State Board was viewing storm water discharges as nonpoint sources. This characterization is understandable. Storm water discharges,

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26 Functional Equivalent Document, Amendment of the Water Quality Control Plan for Ocean Waters of California, California Ocean Plan (March 1990), at pages 33 and 34.

27 It appears that the reference here was to numeric water quality-based limitations, since such limitations are required in Table B. As we explained in Order No. WQ 91-03, water quality-based limitations need not always be numeric.

while ultimately flowing through a point source to receiving waters, are by nature more akin to nonpoint sources as they flow from diffuse sources over land surfaces. This point is discussed in the Preamble to EPA's storm water regulations:

> "For the purpose of [national assessments of water quality], urban runoff was considered to be a diffuse source or nonpoint source pollution. From a legal standpoint, however, most urban runoff is discharged through conveyances such as separate storm sewers or other conveyances which are point sources under the [Clean Water Act]." 55 Federal Register 47991.

We therefore conclude that the petitioner has misinterpreted appropriate criteria and the applicability of Ocean Plan provisions to storm water. There are no numeric objectives or numeric effluent limits required at this time, either in the Basin Plan or in any statewide plan that apply to storm water discharges. This absence, however, will not in any way diminish the permit's enforceability or its ability to reduce pollutants in storm water discharges substantially. While numeric objectives are contained in the Inland Plan, these need not be achieved for up to ten years. In addition, the Plan endorses the application of "best management practices" rather than numeric limitations as a means of reducing the level of pollutants in storm water discharges.

The permit which the Regional Board adopted is very similar to that reviewed in Order No. WQ 91-03. The NPDES permit employs a two-fold strategy: It effectively prohibits non-storm

water discharges and illicit connections; and, it requires a comprehensive series of regulatory, governmental, and educational control measures.

As in the case of the permit issued by the San Francisco Bay Regional Board, the method by which the specific control activities will be implemented is that the dischargers must submit an Implementation Plan for approval by the Regional Board's Executive Officer, and then must implement the Plan. Thus, the permit lists some, but certainly not all of the management practices which will be undertaken. The remaining specific practices will be developed over a two-year period starting with adoption of the NPDES permit. In addition, the "co-participant" cities, which have not yet been added to the permit, are also being required to select appropriate control measures.

Although the permit does not make specific reference to violation of water quality standards, the permit will be read so as to require the implementation of practices which will achieve compliance with applicable standards. Such a requirement is implicit in the issuance of an NPDES permit, since that is a minimum requirement of a permit, as we discussed in Order No. WQ 91-03. The requirement is also a part of the California Water Code. Water Code Section 13263. The permit does provide that the Regional Board may, in the future adopt numeric water quality objectives and limitations.[28]

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28 Permit, Finding 19.

We concluded in Order No. WQ 91-03 that permits for municipal separate storm sewer systems issued pursuant to Clean Water Act Section 402(p) must contain effluent limitations based on water quality standards. In addition, the applicable water quality standards are those established for the receiving waters of the storm water discharges. We further concluded there that even if such effluent limitations are intended to require compliance with water quality standards, "best management practices" constitute legally acceptable effluent limitations. We find here, as we did in Order No. WQ 91-03, that the permit includes a comprehensive and stringent program for reducing pollutants in storm water discharge, and that it will implement the Basin Plan, including the protection of beneficial uses.

We note that the dischargers argued in their response that the fact that the permit was derived from a cooperative effort, prior to the promulgation of regulations by EPA, had relevance to its enforceability. While we are certainly pleased that the dischargers and the Regional Board have been able to work together in a cooperative and positive manner, the permit which was adopted is a lawfully adopted NPDES permit, and is fully enforceable as such. The fact that it was adopted prior to the deadline for adoption of such permits, and prior to promulgation of the regulations, has no relevance to its enforceability. The prohibitions and practices contained in the

permit must be obeyed, and those prohibitions and practices must result in compliance with any applicable water quality standards.

Just as in our review of the San Francisco Bay Regional Board's permit, we have reviewed the appropriateness and propriety of this permit. We find here also that the approach of the Regional Board, requiring the dischargers to implement a program of best management practices which will reduce pollutants in runoff, and prohibiting non-storm water discharges, is appropriate and proper. We base our conclusion on the difficulty of establishing numeric effluent limitations which have a rational basis, the lack of technology available to treat storm water discharges at the end of the pipe, the huge expense such treatment would entail, and the level of pollutant reduction which we anticipate from the Regional Board's regulatory program. We feel compelled to note here our agreement with the Regional Board that this permit does truly represent a massive undertaking. No other permit in the State, and perhaps in the nation, will control the number of outfalls in a metropolitan area as this permit undertakes to regulate.

B. The Maximum Extent Practicable Standard

The petitioners contend that the permit must include specified management practices in order to comply with the requirement in Clean Water Act Section 402(p) of reducing pollutants in municipal separate storm sewer discharges to the maximum extent practicable (MEP). The petitioner states that MEP means, "what can be done now, must be done now." As we stated in

Order No. WQ 91-03, however, we find that the Regional Board's approach of requiring the dischargers to prepare a plan with proposed control measures for approval by the Regional Board is preferable to specifying all such measures in the permit. The petitioner gives as an example a requirement for catch basin cleaning, which it claims would reduce pollutants. However, an effective and cost-effective storm water program requires an analysis of the specific area subject to regulation, and should not involve a simple listing of practices that all municipalities must follow. As EPA stated in its Preamble to the draft storm water regulations:

> "A wide variety of control measures to reduce the discharge of pollutants from municipal storm sewer systems are currently available. The performance of appropriate control measures is highly dependent on site-specific factors. It is therefore not practicable to define one standard set of controls which will control all pollutants in all municipalities." 53 Federal Register 49456[29].

We also note that, while we share the petitioner's goal of rapid achievement of an effective practices program, the Clean Water Act does not require implementation of all measures now, but rather has set forth a three-year time schedule for compliance. We shall discuss this point further in the next section.

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29 This point was also made in the preamble to EPA's final regulations. 55 Fed. Reg. 48038. There a reference to the legislative history of Clean Water Act Section 402(p) makes clear that Congress' intent was not to dictate specific practices.

C. Time Schedule for Compliance

The petitioner contends that the permit violates the Clean Water Act by not requiring timely compliance with water quality standards. We addressed this point in Order No. WQ 91-03. Here, also, we find that the permit contains provisions requiring such compliance.

The permit includes a very aggressive and comprehensive program of developing and implementing best management practices over a three-year period. The permit does require a program aimed at compliance with applicable water quality standards and all practices necessary to achieve such compliance must be in place within three years of adoption of the permit. Therefore, the permit complies with the time schedule requirements of the Clean Water Act. The permit also specifically provides that the Regional Board may include more stringent effluent limitations, including numeric effluent limitations if necessary.

III. CONCLUSIONS

After review of the record and consideration of the contentions of the petitioners, and for the reasons discussed above, and in Order No. WQ 91-03, we conclude:

1. Impacts of storm water discharges on receiving waters and Santa Monica Bay are complicated, and at this time, it would be infeasible to establish numeric effluent limitations on

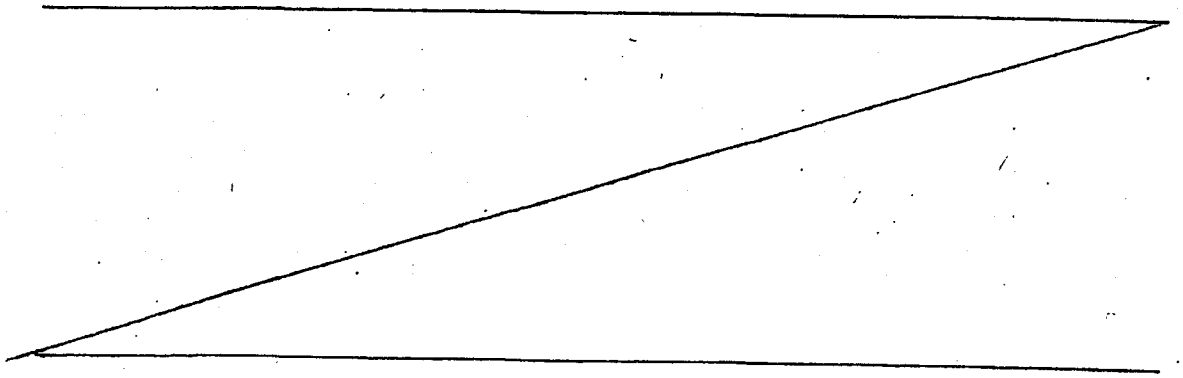
discharges to storm drains in the Los Angeles River Basin, which are validly associated with impacts in Santa Monica Bay.

2. The permit adopted by the Regional Board requires implementation of specific source control measures and effectively prohibits discharges of non-storm water and violation of water quality standards.

3. The provisions in the Clean Water Act regulating municipal storm water discharges require effluent limitations and achievement of water quality standards, but the limitations may consist of source control measures, rather than numeric effluent limitations.

4. It is appropriate and proper to issue a permit regulating municipal separate storm sewer systems which requires specific practices, rather than containing numeric effluent limitations.

5. The specific control measures requested by the petitioner should be considered by the Regional Board when approval of the dischargers' control plan is sought, rather than by this Board.



6. The permit complies with the time schedule requirements of the Clean Water Act.

IV. ORDER

IT IS ORDERED that the petition is denied.

CERTIFICATION

The undersigned, Administrative Assistant to the Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on May 16, 1991.

AYE: W. Don Maughan
Edwin H. Finster
Eliseo M. Samaniego
John Caffrey

NO: None

ABSENT: None

ABSTAIN: None

Maureen Marché
Administrative Assistant to the Board

EXHIBIT "6"

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of the Petition of **Save San Francisco Bay Association, et al.,** for Review of Waste Discharge Requirements Order No. 95-180, NPDES Permit No. CAS029718, by the California Regional Water Quality Control Board, San Francisco Bay Region. File No. A-992.	ORDER NO. WQ 96-13

BY THE BOARD:

On August 23, 1995, the California Regional Water Quality Control Board, San Francisco Bay Region (SFBRWQCB) adopted waste discharge requirements for storm water discharges from municipal separate sewer systems throughout the Santa Clara Valley.[1] The waste discharge requirements constituted a national pollutant discharge elimination system (NPDES) permit pursuant to Section 402(p) of the federal Clean Water Act (CWA). The co-permittees include Santa Clara Valley Water District, County of Santa Clara, and thirteen cities (dischargers).

On September 25, 1995, the State Water Resources Control Board (SWRCB) received a petition from Save San Francisco Bay Association, San Francisco BayKeeper, Peninsula Conservation Center Foundation, Sierra Club Bay Chapter, Sierra Club Loma Prieta Chapter, Citizens Committee to Complete the Refuge, and

[1] For an extensive discussion of the system, see Order No. WQ 91-03 which concerned an earlier version of waste discharge requirements for the same discharges.

Silicon Valley Toxics Coalition (petitioners), contesting the issuance of the NPDES permit.[2]

I. BACKGROUND

The NPDES permit is a reissuance of a permit first issued in 1990 for discharges of storm water from municipal separate storm sewer systems (MS4s) throughout the Santa Clara Valley to creeks and streams tributary to South San Francisco Bay. The earlier permit (Order No. 90-094) was reviewed and upheld by the SWRCB in Order No. WQ 91-03. That order included extensive discussion of the federal statutory and regulatory requirements for storm water discharges from MS4s, which will not be repeated here.

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[2] This order is based on the record before the SFBRWQCB. In addition, the record is supplemented by the following documents: "Municipal Separate Storm Sewer System Permit Reapplication Policy," transmitted by "Interpretative Policy Memorandum on Reapplication Requirements for Municipal Separate Storm Sewer Systems," U.S. Environmental Protection Agency (EPA), May 17, 1996 (hereafter, Reapplication Policy); Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits," EPA, August 1, 1996 (hereafter Effluent Limitations Policy); "Antibacksliding: Effect on Water Quality-Based Effluent Limitations," EPA, August 8, 1994 (hereafter Antibacksliding Brief); and letter from Terry Oda, EPA Region 9, dated June 26, 1996, concerning the Orange County storm water permit (hereafter, letter from EPA Region 9). Following the close of the public comment period, several letters were received from interested persons. These are not part of the record, except for the comments received on the draft order from counsel for the parties.

II. CONTENTIONS AND FINDINGS[3]

The petition contends that the SFBRWQCB should not have issued the NPDES permit because the permit application was incomplete and that various aspects of the permit are inadequate or improper.

Contention: The NPDES permit should not have been reissued because the permit application was insufficient.

Findings: The petitioners contend that the permit application submitted by the dischargers was insufficient and that the SFBRWQCB was, therefore, prohibited from issuing the permit. The petitioners cite regulations adopted by the EPA.

The EPA set forth detailed permit application requirements for large and medium municipal separate storm sewer discharges, such as the discharges at issue here, in 40 CFR Section 122.26(d). These requirements include extensive information about the storm sewer system and the methods by which the municipal entities will regulate and monitor their discharges. A part of these application requirements is submission of a storm water management plan (SWMP) to reduce the discharge of pollutants to the maximum extent practicable (MEP). (40 CFR Section 122.26(d)(2)(iv).) The petitioners claim that the dischargers' SWMP does not contain adequate control measures. The petitioners also claim that other information required in Section 122.26(d) was missing, including source identification,

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[3] All other contentions raised in the petition which are not discussed in this order are dismissed. (23 Code of California Regulations (CCR) Section 2052; *People* v. *Barry* (1987) 194 Cal.App.3d 158.)

characterization data, and assessment of controls. The petitioners contend that the SFBRWQCB was precluded from issuing the NPDES permit by 40 CFR Section 122.21(e), which limits the issuance of NPDES permits where an application is incomplete.

It is not necessary to address the contention that Section 122.21(e) prevents the SFBRWQCB from issuing an NPDES permit if an application is incomplete since the EPA has issued a policy and interpretative memo clarifying that, while reapplication for a second-round permit is required, the permit application requirements in 40 CFR Section 122.26(d)(2) apply only to first-round permit applications for large and medium MS4s, and not to the second round of permits. Instead, the reapplication requirements are "flexible" and are based on the minimum application requirements for all NPDES permits contained in 40 CFR Section 122.21(f). (Reapplication Policy.) The EPA encourages the reapplication package to consist only of the dischargers' fourth annual report,[4] which would include the proposed SWMP. (Id.) As explained above, the NPDES permit is a second-round storm water permit and the EPA policy is, therefore, applicable. The dischargers' permit application was consistent with the Reapplication Policy.

Administrative agencies are generally accorded a high degree of deference in the areas of law which they regulate.

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[4] Annual reports are required components of all MS4 permits. Each permit operates for five years and use of the fourth annual report allows for timely preparation of a new permit.

(See, e.g., *Chevron U.S.A.* v. *Natural Res. Def. Council* (1984) 467 U.S. 837.) In interpreting EPA's regulations, it is proper to accord significant deference to EPA's policy expressions. The SWRCB will therefore follow the Reapplication Policy, and other EPA policy statements discussed in this order, in determining compliance with the Clean Water Act and EPA's regulations promulgated thereunder.

Contention: The petitioners contend that the permit lacks control measures.

Finding: The petitioners contend that the permit improperly requires the dischargers to implement their SWMP, and instead should specify the control measures that dischargers must implement. The petitioners believe that control measures must be specified in the permit pursuant to CWA Section 402(p)(3)(B)(iii). The petitioners argue the SFBRWQCB should not have incorporated the SWMP requirements into the permit without circulating the SWMP as a part of the permit and that the permit should have specified further control measures.

CWA Section 402(p)(3)(B)(iii) states that permits for MS4s:

> "[S]hall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as . . . the State determines appropriate for the control of such pollutants."

The petitioners have misconstrued this section to mean that the SFBRWQCB must dictate the specific controls that

dischargers must implement. Instead, the SWRCB interprets the section to mean that the permit must contain provisions that will require the dischargers to select and implement adequate controls. It is perfectly appropriate for the SFBRWQCB, as it did here, to implement this section by requiring the dischargers to comply with their own SWMP, and to make revisions to the SWMP in the areas where the document was found lacking. While the SFBRWQCB did incorporate the SWMP into the permit, it also provided for amendments to the SWMP as necessary to achieve MEP and water quality standards. The SWRCB interprets the incorporation not as applying to the SWMP as it existed on the date the permit was adopted, but as a continuing duty to comply with any current SWMP provisions. In other words, the permit requires continual improvements to the SWMP and compliance with the plan requirements. This approach is consistent with the federal law and is in concert with the approach favored by the EPA.

The permit requires the dischargers to implement control measures and BMPs to reduce pollutants in storm water discharges to the MEP, as provided by federal law. The federal law does not require the SFBRWQCB to dictate the specific controls. The permit recognizes the SWMP as a dynamic document which requires ever-changing revisions and improvements as monitoring and assessment of BMPs to provide new information. The annual report is the mechanism for such assessment, and the

permit anticipates that assessment will result in modification of the SWMP.

The SFBRWQCB's approach is supported by the EPA's policy documents. The Reapplication Policy transmitted by the EPA acknowledges that the best management practices (BMPs) that will be implemented are contained in the SWMP and explains that each annual report must include proposed revisions to the SWMP. (Reapplication Policy, at page 3; 40 CFR Section 122.42(c)(2).) The EPA encourages use of the fourth annual report as the basic application package. In other words, the EPA acknowledges the SWMP as a dynamic document which should be revised more frequently than the permit is reissued. The SFBRWQCB has appropriately accommodated the needed flexibility in the SWMP while also specifying the standards to be attained (MEP and compliance with water quality objectives) and the areas requiring improvement.

The SFBRWQCB found that the SWMP was generally adequate, although it required certain improvements to resolve deficiencies in some of the actions and the time frame. (NPDES Permit, finding 5.) Provision C of the permit includes specific requirements to improve and implement the SWMP. The permit requires implementation of BMPs stated in the SWMP, ensures coverage of all major source areas known to the SFBRWQCB, and mandates improvements where necessary. The implementation and effectiveness of the BMPs must be evaluated in the annual reports. This combination of extensive control measures and an

annual evaluation of the implementation and effectiveness of the control measures is a program that meets the MEP standard.[5]

Contention: The petitioners claim that the permit unlawfully "backslides" from the prior permit.

Findings: Section 402(o) of the CWA contains limitations on the ability of the permitting authority to reissue NPDES permits that contain effluent limitations less stringent than in a prior NPDES permit. The provisions of Section 402(o) are detailed and contain several exceptions. The petitioners claim that Section 402(o) was violated because the permit deleted some of the activities specifically listed in the earlier permit where these activities are covered by the SWMP. Further, the petitioners claim that the SWMP includes a time schedule and that the time schedule violates the EPA order *In the Matter of Star-Kist Caribe, Inc.*, NPDES Appeal No. 88-5.

The SWRCB does not agree that Section 402(o) has been violated. First, as explained above, the SFBRWQCB appropriately ordered the dischargers to achieve MEP by complying with their SWMP and by making improvements where necessary. In revising the language from the first permit (which specified all areas the SWMP must cover) to the second permit (which instead ordered the dischargers to comply with the SWMP where it did adequately address those areas), the SFBRWQCB did not adopt a less stringent

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[5] While the permit does not require the dischargers to estimate the expected reduction of pollutant loads for each source control measure, the EPA has acknowledged that in most cases permitting authorities do not have the ability at this time to link directly the BMPs implemented with impacts on receiving waters. (Effluent Limitations Policy.)

permit. Second, as explained below, the SFBRWQCB has latitude to revise BMP requirements without violating Section 402(o).

The petitioners argue that CWA Section 402(o) prohibits the SFBRWQCB from eliminating any previous requirements for BMPs because the requirements were necessitated both to achieve MEP and to protect water quality, and that Section 402(o) prohibits the adoption of less stringent effluent limitation if the original limitation was adopted to protect water quality. While the SWRCB agrees that the NPDES permit requirements to implement BMPs are, in part, water-quality based effluent limitations,[6] the SWRCB does not read Section 402(o) to prohibit the SFBRWQCB from revising the BMP requirements, even if that may include eliminating the need for some previously implemented BMPs.[7]

Section 402(o) contains exceptions where

> ". . . information is available which was not available at the time of permit issuance . . . and which would have justified the application of a less stringent effluent limitation . . . ." (Section 402(o)(2)(B)(i).)

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[6] In Order No. WQ 91-03, the SWRCB addressed the contention that the requirement to implement BMPs did not constitute the water quality-based effluent limitations required by the Clean Water Act. There it was stated:

> "Our review of the relevant law reveals that the permit's scheme of prohibitions, source control measures and best management practices constitutes valid effluent limitations consistent with requirements of 'maximum extent practicable' controls and water quality standards."

[7] As stated above, there is, in fact, no evidence that the BMP requirements in this permit are less stringent or that any BMPs have been eliminated.

According to the EPA, in its Antibacksliding Brief, revisions to water quality-based effluent limitations based on new information are appropriate so long as there is a net reduction in pollutant loadings. Any revisions to BMPs incorporated into or anticipated by the permit clearly fall within this exception, since they will be the result of new information from monitoring or analysis of effectiveness, and the dischargers remain bound to the same standards of compliance. The EPA has also acknowledged that the process of developing the SWMP will result in revising BMPs as new information becomes available. (Reapplication Policy.) It is absurd to assume that such revisions would violate the antibacksliding prohibition.

The SWRCB also finds that the SFBRWQCB did not violate the EPA's rule in *Star-Kist Caribe* by allowing time for BMPs to work and be evaluated and implemented. While the SWRCB agrees that an NPDES permit cannot include a time schedule for compliance with water quality objectives established prior to July 1, 1977,[8] the SFBRWQCB has not established such a time schedule here. Under the provisions of the permit, the effluent limitations (i.e., the requirements to implement BMPs pursuant to a SWMP) are in place and effective immediately. The time schedule for assessment and improvements are meant to increase the ability of the SFBRWQCB and the dischargers to ensure that the dynamic nature of selecting, evaluating, and implementing BMPs occurs throughout the term of the permit.

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[8] See, *City of Stockton*, Order No. WQ 96-09.

Contention: The petitioners claim the permit does not provide for compliance with water quality standards.

Findings: Storm water permits for MS4s must achieve compliance with water quality objectives, but they may do so by requiring the implementation of BMPs. (Order No. WQ 91-03.) The petitioners claim that although the permit specifically prohibits discharges that cause violation of water quality objectives, that prohibition is "nullified" by stating that the dischargers "shall comply . . . through the timely implementation of control measures and other actions to reduce pollutants in the discharge." (Permit, Provision C.1.) Provision C.1. also authorizes the SFBRWQCB to reopen the permit if necessary to require further BMPs or revision of the SWMP. (Id.) Petitioners claim the lengthy process of reopening the permit would result in delays in achieving water quality objectives.

The petitioners' concerns are not warranted. The NPDES permit clearly requires the implementation of BMPs that will not cause a violation of water quality objectives. The method for achieving compliance is through implementation of a SWMP and BMPs which must, throughout the term of the permit, be evaluated, assessed, and improved. The reopener provision in C.1. simply provides that if, notwithstanding these processes, adverse impacts to receiving waters persist, the permit may be reopened.

The approach taken by the SFBRWQCB is consistent with statements from the EPA concerning the most effective regulation of MS4s. The Effluent Limitations Policy encourages a permitting

approach using "expanded or better-tailored" BMPs in second-round permits. The EPA states that most MS4 permits include "educational and programmatic BMPs," and describes this approach as one where dischargers are required to "adopt and implement adequate BMPs." In other words, the permitting approach, wherein the discharger is required to implement a SWMP with BMPs, has been found by the EPA to be the most effective way to ensure compliance with water quality standards, at least until more information is available definitively tying storm water discharges to impacts on receiving waters. Finally, a similar approach taken by the RWQCB for the Santa Ana Region, was sanctioned by the EPA as follows:

> "The Orange County storm water permit states that receiving water limitations may not exceeded [sic], but then provides that if there are exceedences, [sic] the permittees would not be in violation of the permit if they follow up with certain actions. We appreciate the concerns . . . regarding the way the permit seems to say that 'a violation is not a violation.' However, the net effect of this condition is to focus on BMP implementation for now, and this is consistent with the draft national policy." (Letter from EPA Region 9.)

III. CONCLUSIONS

After review of the record and consideration of the contentions of the petitioners, and for the reasons discussed above, the SWRCB concludes that the Regional Water Quality Control Board, San Francisco Bay Region, acted appropriately and

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properly in adopting the NPDES permit for storm water discharges from municipal separate storm sewers in the Santa Clara Valley.

IV. ORDER

IT IS ORDERED that the petition is denied.

CERTIFICATION

The undersigned, Administrative Assistant to the Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted a meeting of the State Water Resources Control Board held on September 19, 1996.

AYE: John P. Caffrey
John W. Brown
James M. Stubchaer
Mary Jane Forster

NO: Marc Del Piero

ABSENT: None.

ABSTAIN: None.

Maureen Marché
Administrative Assistant to the Board

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

AUG 08 1994

Mr. Walt Pettit
Executive Director
California State Water Resources
Control Board
P.O. Box 100
Sacramento, CA 95812-0100

re: Antibacksliding Related to Water Quality-Based Effluent Limitations

Dear Walt:

The issue of antibacksliding has been at the forefront of discussions regarding water quality-based effluent limitations. Many dischargers are concerned with being bound to effluent limitations they may not be able to meet. As a result they have been reluctant to accept permits containing stringent water quality-based effluent limitations. This has resulted in delays in issuing some permits.

To allay those concerns we have prepared a brief on antibacksliding as it relates to water quality-based effluent limitations. The interpretation reflects the Agency's current thinking on this matter and relies on published documents. In summary we do not believe that antibacksliding is as onerous as some would believe. The statute provides sufficient exceptions to the prohibition against antibacksliding that allow for reasonable relaxation of effluent limitations. The brief is enclosed.

I hope this will be of assistance to the State and Regional Boards. I am taking the liberty to forward copies to the Regional Boards, CASA and Tri-TAC.

Sincerely,

Catherine Kuhlman

Catherine E. Kuhlman
Chief
Permits and Compliance Branch

cc: Regional Water Quality Control Boards

ANTIBACKSLIDING
EFFECT ON WATER QUALITY-BASED EFFLUENT LIMITATIONS

Due to doubts about complying with effluent limitations based on stringent water quality criteria, the effect of antibacksliding (section 402(o) of the Clean Water Act) on modifications of effluent limitations has become an important issue. Dischargers are loath to accept permits with stringent water quality-based effluent limitations, even where the effectiveness of those effluent limitations are delayed through the use of compliance schedules. The concern is the fear of being forever bound to effluent limitations that can not be met.

To allay those concerns, two of the most prominent issues are addressed in this brief. The first issue is whether antibacksliding prohibits relaxation of water quality-based effluent limitations whose compliance date has not yet passed, i.e., the effective date of those limitations are delayed by a compliance schedule. The second issue is whether antibacksliding prohibits relaxation of water quality-based effluent limitations which a discharger has been unable to achieve.

The CWA prohibits reissuing or modifying a permit to include effluent limitations less stringent than comparable effluent limitations in the previous permit unless certain exceptions are met. Those exceptions are set forth in sections 303(d)(4) and 402(o)(2) of the CWA. These two sections of the CWA provide independent exceptions to the prohibition. Meeting any one of the exceptions of either section is sufficient basis for relaxing the effluent limitations. [see 40 FR, p. 20837, Vol. 58 No. 72, April 16, 1993, Proposed Great Lakes Initiative (GLI); and Technical Support Document for Water Quality-Based Toxics Control (TSD), p. 113, EPA/505/2-90-001, March 1991]

1) Effect on Water Quality-Based Effluent Limitations prior to the Compliance Date.

Antibacksliding does not apply to changes made to an effluent limitation prior to its compliance date. If a permit is issued with a compliance schedule delaying the effective date of a water quality-based effluent limitation, that limitation may be relaxed without concern for antibacksliding if the modification is made prior to the effective date of the limitation. (see GLI, pp. 20837, 20981 and 21045)

2) Effect on Water Quality-Based Effluent Limitations being Violated.

The exceptions to the prohibition set forth in section 402(o)(2) of the CWA applies to water quality-based and best professional judgement (BPJ) based effluent limitations. Water quality-based effluent limitations may be relaxed if any of the following is met (TSD, p. 113):

a) There have been material and substantial alterations or additions to the permitted facility which justify the application of less stringent effluent limitations.

b) Good cause exists due to events beyond the permittee's control and for which there is no reasonably available remedy.

c) The permittee has installed the treatment facilities required to meet the effluent limitations in the previous permit and has properly operated and maintained the facilities but still has been unable to meet the effluent limitations (relaxation may only be allowed to the treatment levels actually achieved).

d) New information (other than revised regulations, guidance, or test methods) justifies relaxation of water quality-based permit limitations. (This applies to water quality-based limitations only where revised limitations result in a net reduction in pollutant loadings and are not the result of another discharger's elimination or substantial reductions of its discharge for reason's unrelated to water quality, e.g., plant shutdown.)

Anyone of the above section 402(o)(2) exceptions may be used as a basis to justify relaxation of water quality-based effluent limitations. Alternatively, the provisions of 303(d)(4) may be used to obtain such relief.

Section 303(d)(4) allows establishment of less stringent water quality-based effluent limitations. The criteria for the exceptions varies for attainment and nonattainment waters:

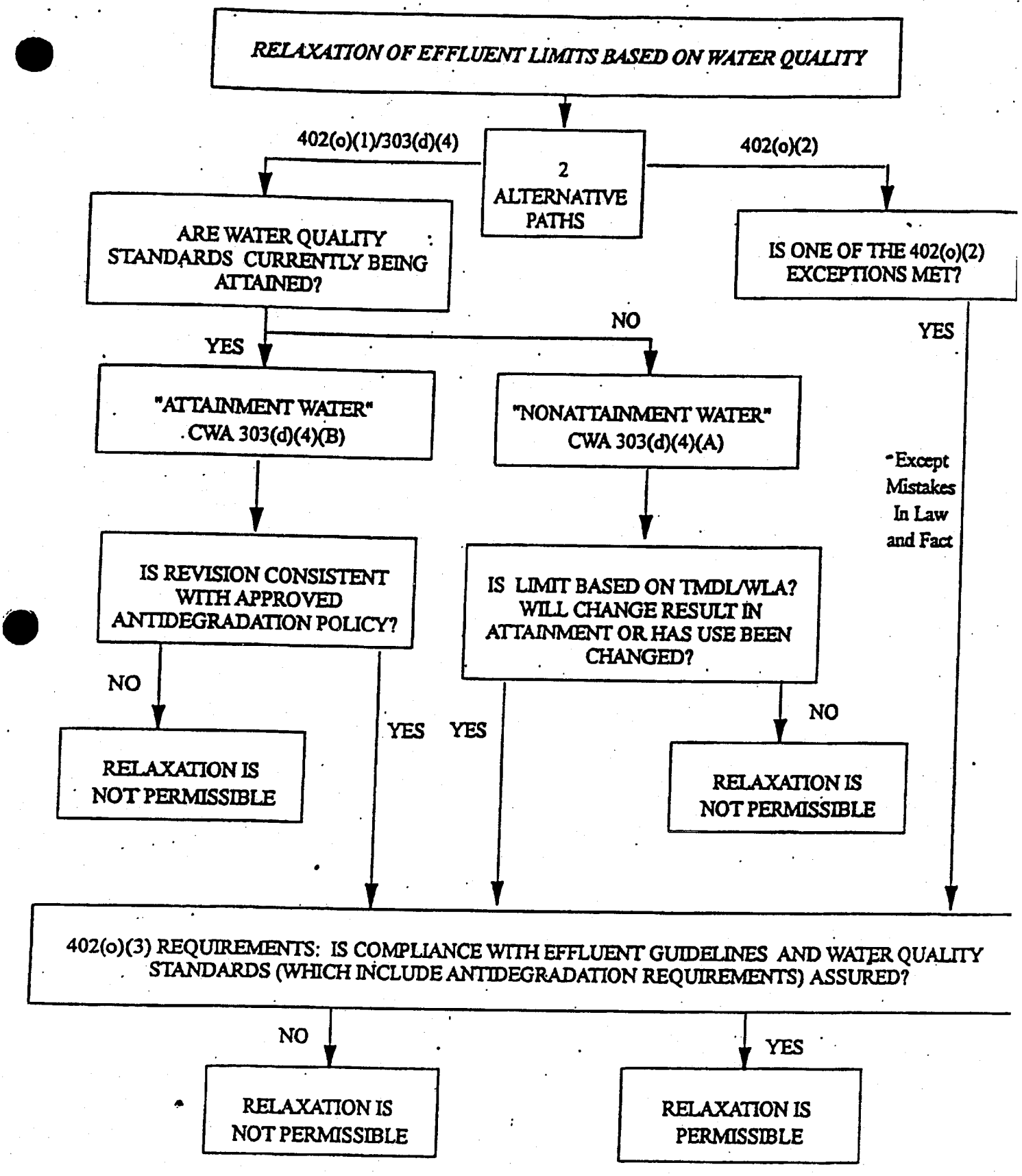
a) Attainment Waters: In waters where the applicable water quality standard has been attained, a water quality-based effluent limitation may be relaxed to the extent that the less stringent limitation is consistent with the State's antidegradation policy.

b) Nonattainment Waters: In waters where the applicable water quality standard has not yet been attained, an effluent limitation based on a total maximum daily load (TMDL) or other waste load allocation may be made less stringent if the cumulative effect of all such revisions assures attainment of the water quality standard, or the designated use which is not being attained is removed in accordance with the applicable regulation (40 CFR 131.10).

It should be noted that any relaxation of an effluent limitation can not be less stringent than the technology-based requirement set forth in the applicable effluent limitations guideline, or cause a violation of the applicable water quality standard. (see section 402(o)(3) of the CWA)

The processes diagramed above are illustrated in the attached diagrams (Flow Charts

FLOW CHART A
ANTIBACKSLIDING



FLOW CHART B
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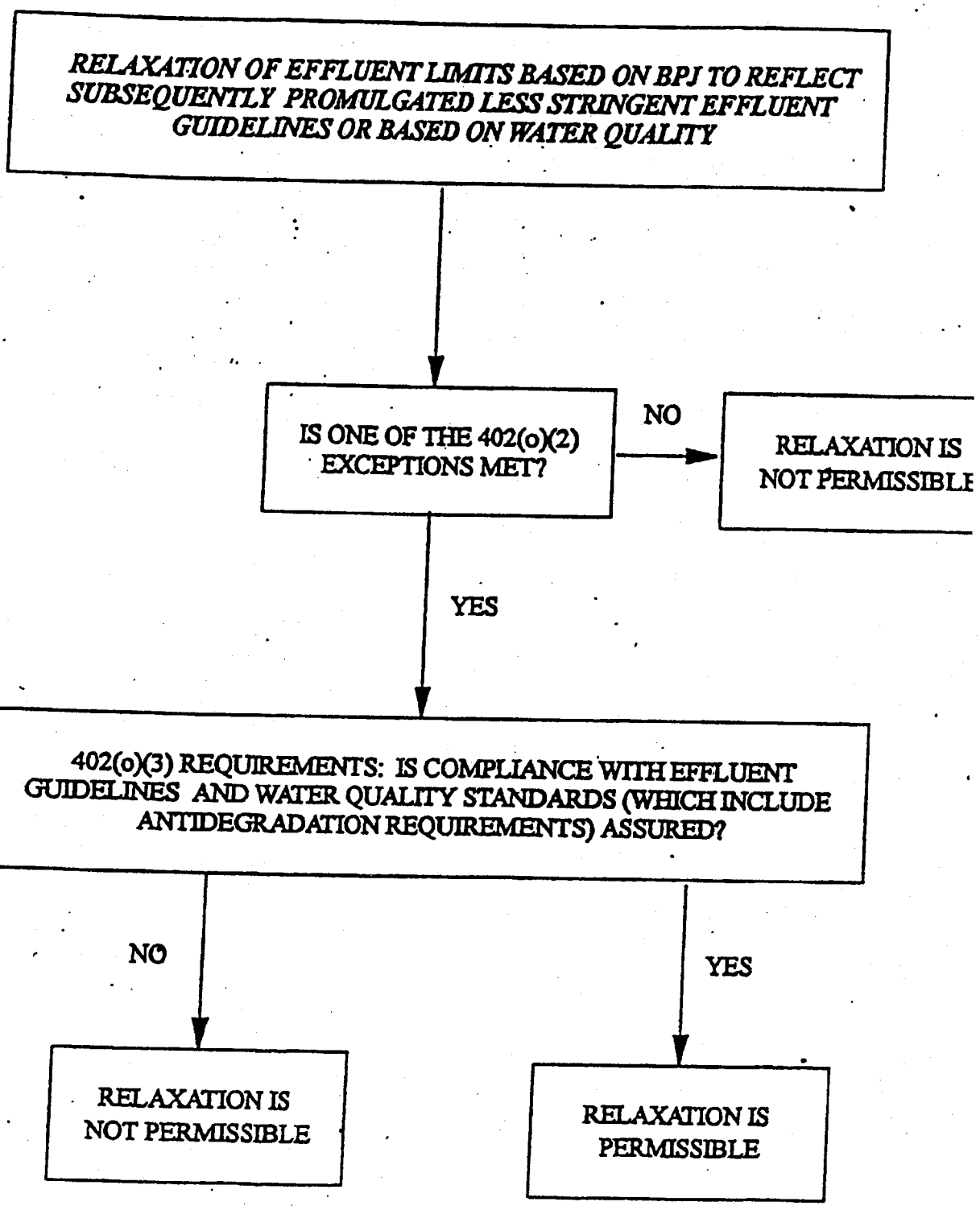

FLOW CHART C
ANTIBACKSLIDING

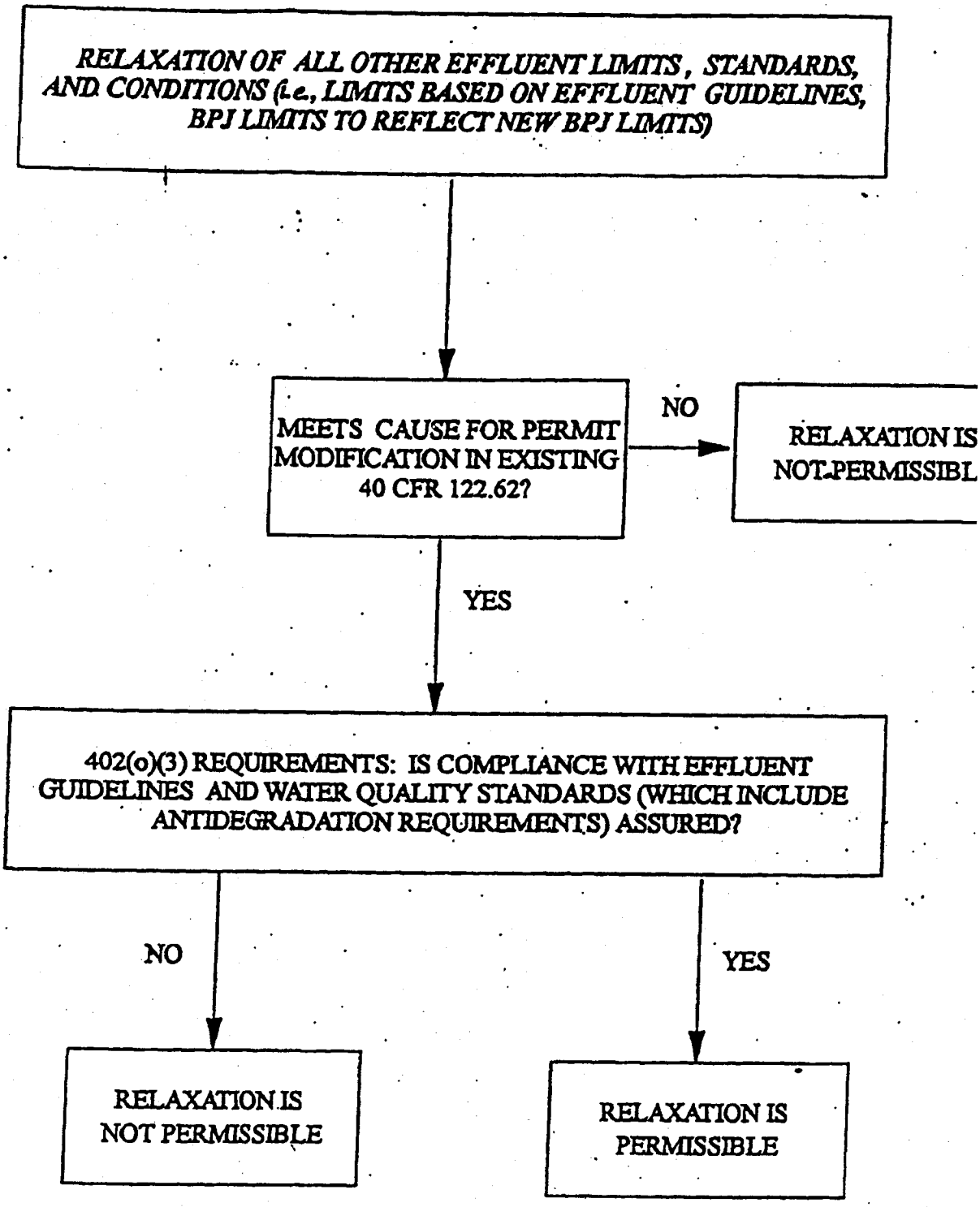

EXHIBIT "7"

KCB

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

ORDER WQ 98-01

Own Motion Review of the Petition of
ENVIRONMENTAL HEALTH COALITION
to Review Waste Discharge Requirements Order 96-03,
NPDES Permit No. CAS0108740,
for Storm Water and Urban Runoff from the
Orange County Flood Control District
and the
Incorporated Cities of Orange County
Within the San Diego Region,
Issued by the
California Regional Water Quality Control Board,
San Diego Region.

SWRCB/OCC File A-1041

BY THE BOARD:

On August 8, 1996, the Regional Water Quality Control Board, San Diego Region (Regional Water Board), adopted Waste Discharge Requirements Order 96-03, NPDES No. CAS0108740, for storm water discharge from municipal separate sewer systems for the incorporated cities of Orange County within the San Diego Regional Water Board's boundaries (Orange County permit).[1] The waste discharge requirements constitute a national pollutant discharge elimination system (NPDES) permit pursuant to section 402(p) of the federal Clean Water Act (CWA).

[1] On March 8, 1996, the Regional Water Quality Control Board, Santa Ana Region, issued waste discharge requirements for storm water discharge to the incorporated cities of Orange County within the Santa Ana Regional Water Board's boundaries that are essentially identical to the permit adopted by the San Diego Regional Water Board.

On September 6, 1996, the State Water Resources Control Board (SWRCB) received a petition from the Environmental Health Coalition (petitioner) contesting certain provisions of the NPDES permit.[2] The SWRCB did not take formal action on the petition within the 270 days specified in Title 23, California Code of Regulations, section 2052(d). The SWRCB will, on its own motion, review the Regional Water Board's action as authorized by California Water Code section 13320(a).

I. BACKGROUND

The primary issue raised by petitioner concerns the Regional Water Board's implementation of the CWA requirement that all NPDES permits must include technology-based effluent limitations and any more stringent limitation necessary to meet water quality standards. Federal and state requirements relevant to the issues raised in the petition are discussed below.[3]

CWA section 301(a) prohibits the discharge of any pollutant unless pursuant to an NPDES permit. (33 U.S.C. § 1311(a).) Section 301(b)(1)(A) requires compliance with effluent limitations necessary to achieve compliance with technology-based standards (e.g., best practicable control technology currently available or secondary treatment). Section 301(b)(1)(C) also requires compliance with any more stringent effluent limitation "necessary to meet water quality standards." (33 U.S.C.

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[2] This order is based on the record before the Regional Water Board. The Regional Water Board also issued an NPDES permit to the Department of Transportation and a petition was filed challenging that permit. In preparing this order, we have reviewed the record for the petition challenging that permit and other documents noted in this Order.

[3] See State Water Resources Control Board Order WQ 91-03 (*Citizens For a Better Environment, et al.*) for an extensive discussion of the regulatory framework for municipal separate storm sewer systems.

§ 1311(b)(1)(c).) CWA section 402 establishes requirements for NPDES permits. (33 U.S.C. § 1342.) NPDES permits must comply with section 301. Section 402(p) establishes specific NPDES permit requirements for municipal storm water discharges and for storm water discharges associated with industrial activities. Section 402(p) includes a technology-based standard for storm water permits issued to municipal separate storm sewer systems. Such permits must require:

> ". . . controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants." (33 U.S.C. § 1342(p)(3)(B)(iii).)

To comply with CWA sections 301 and 402 for municipal separate storm water discharges, a municipal storm water NPDES permit must include effluent limitations to meet the technology-based standard to reduce pollutants to the "maximum extent practicable" and any more stringent effluent limitations necessary to meet water quality standards. The United States Environmental Protection Agency (EPA) has promulgated regulations to implement NPDES requirements in CWA section 402, including storm water requirements of CWA section 402(p).[4] (See 40 C.F.R. Part 122.26.)

[4] CWA Section 402(p) specifies that permits for industrial discharges are required to comply with all technology-based and water quality-based requirements. (Section 402(p)(3)(A).) In contrast, CWA Section 402(p) specifies that permits for municipal separate storm water discharges shall require controls to comply with technology-based requirements but does not specifically state that municipal permits must require controls to comply with water quality-based requirements. (Section 402(p)(3)(B).) EPA, however, has interpreted the Clean Water Act to require permits for municipal separate storm water discharges to include requirements to achieve compliance with water quality standards. See memorandum "Compliance with Water Quality Standards in NPDES Permits Issued to Municipal Separate Storm Sewer Systems" from E. Donald Elliott, General Counsel, EPA, to Nancy J. Marvel, Regional Counsel, EPA Region 9 (January 9, 1991).

CWA section 303 requires states to adopt water quality standards for surface waters. (33 U.S.C. § 1313.) Water quality standards consist of the designated uses of waters and the water quality criteria for such waters that would support the designated uses. The Regional Water Board in its Water Quality Control Plan for the San Diego region has adopted water quality standards by designating the beneficial uses for waters in the region and establishing water quality objectives (i.e., water quality criteria) to protect those uses. See Water Quality Control Plan for the San Diego Basin (9), September 8, 1994, at Chapters 2 and 3. The SWRCB has also adopted water quality control plans and policies that specify water quality standards which are relevant to this permit (e.g., the SWRCB Ocean Plan). To comply with CWA section 301, municipal storm water permits must include effluent limitations where necessary to meet these water quality standards.

NPDES permits issued by the Regional Water Boards, including municipal storm water permits, typically include a requirement entitled "discharge limitations" or "effluent limitations" that specifies the technology-based effluent limitations and a requirement entitled "receiving water limitations" or "receiving water standards" that specifies the water quality objectives in the Water Quality Control Plan relevant to the discharge and limitations necessary to attain those objectives. The receiving water limitations provision is used to implement the requirement of CWA section 301(b)(1)(C) to include more stringent effluent limitations necessary to meet

water quality standards.[5] The limitations necessary to meet water quality standards are also called the water quality-based effluent limitations. NPDES permits are generally required to include numeric effluent limitations to implement the technology-based standard and water quality-based effluent limitations to attain the water quality standards.[6] (40 C.F.R. § 122.44.) However, the federal regulations allow the use of best management practices (BMPs) to control or abate the discharge of pollutants when numeric effluent limitations are infeasible. (40 C.F.R. § 122.44(k).) The SWRCB has determined that for municipal separate storm water permits, BMPs constitute valid effluent limitations to comply with both the technology-based and water quality-based effluent limitation requirements.[7] See SWRCB Orders WQ 91-03 and WQ 91-04. In fact, narrative effluent limitations requiring implementation of BMPs are generally the most appropriate form of effluent limitations when designed to satisfy technology requirements, including reduction of pollutants to the maximum extent practicable, and water quality-based requirements of the CWA.

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[5] SWRCB Order WQ 91-03 concluded that municipal permits must include effluent limitations necessary to achieve water quality standards. See Order WQ 91-03 at slip op. 36. Orange County and other interested persons have argued that section 402(p) does not require municipal permits to meet water quality standards. While disagreeing, it should be noted that section 402(p) contains explicit authority for states to require provisions in addition to the "maximum extent practical" controls.

[6] See memorandum "Numeric Effluent Limitations in NPDES Permits" from Elizabeth Miller Jennings, Senior Staff Counsel, State Water Resources Control Board, to Central Valley Regional Water Quality Control Board (Aug. 1, 1997).

[7] EPA has issued a national policy entitled "Interim Permitting Approach for Water Quality-Based Effluent Limitations in Stormwater Permits," 61 Fed. Reg. 43761 (Aug. 26, 1996), that addresses issues related to the type of effluent limitations that are appropriate to provide for attainment of water quality standards. The policy applies only to EPA, but EPA has encouraged states to adopt similar policies for storm water permits. The policy states that storm water permits need not include numeric water quality-based effluent limitations. Rather, BMPs should be used to attain water quality-based effluent limitations, which should be expanded in later permits if necessary to provide for attainment of water quality standards.

II. CONTENTIONS AND FINDINGS[8]

The petitioner seeks review of the Orange County permit adopted by the Regional Water Board. The Orange County NPDES permit, adopted by the Regional Water Board, applies to the incorporated cities in Orange County within the boundaries of the San Diego region. The Santa Ana Regional Water Board, on March 8, 1996, adopted an NPDES permit for storm water discharges from the incorporated cities of Orange County within the boundaries of the Santa Ana region.[9] Orange County had requested that the Santa Ana Regional Water Board adopt one permit for all of Orange County. The San Diego Regional Water Board preferred to retain jurisdiction but agreed to adopt a permit consistent with the permit adopted by the Santa Ana Regional Water Board. Both permits for Orange County are essentially identical and require the permittees to develop a plan establishing BMPs to control discharges to the "maximum extent practicable." The Orange County permittees adopted a plan called the "drainage area management plan" (DAMP) that was approved by the San Diego Regional Water Board on April 6, 1996.[10] Both permits also contain the same provision addressing receiving water limitations, which, in relevant part, states:

> "1. Receiving water limitations have been established based on beneficial uses, water quality objectives, and water quality standards contained in the Basin Plan, and amendments thereto, and on ambient water quality. They are intended to protect the beneficial uses and attain the water quality objectives contained in the Basin Plan. The discharge of urban storm water, or non-storm water, from a municipal storm sewer system

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[8] All other contentions raised in the petition which are not discussed in this order are dismissed. (Cal. Code Regs., tit. 23, § 2052; *People* v. *Barry* (1987) 194 Cal.App.3d 158 [239 Cal.Rptr. 349].)

[9] No petition was filed challenging the permit issued by the Santa Ana Regional Water Board.

[10] The DAMP was also approved by the Santa Ana Regional Water Board.

for which the permittees are responsible under the terms of this permit shall not cause continuing or recurring impairment of beneficial uses or exceedances of water quality objectives. The permittees will not be in violation of this provision so long as they are in compliance with the requirements set forth [in the following provision]."

"a. If the Executive Officer determines that a continuing or recurring impairment of beneficial uses or exceedances of water quality objectives has been caused by urban storm water discharges from the municipal storm sewer system, the following steps shall be taken. . . ."

The remainder of the provision requires the Executive Officer to evaluate the DAMP and if the Executive Officer determines that implementation of the DAMP will not have a reasonable likelihood of preventing future impairment of beneficial uses or exceedances of water quality objectives, the permittees would be required to submit a report evaluating impacts on water quality and proposing changes to implementation of the existing DAMP or proposing revisions to the DAMP. The permittees would then be required to implement the revised DAMP.

Petitioner contends that for several reasons, this receiving water limitations provision is inadequate under the CWA and its implementing regulations and under the Porter-Cologne Water Quality Control Act (Porter-Cologne Act). Petitioner points out that CWA section 402(b), and implementing regulations, require that NPDES permits issued by state agencies comply with the CWA. (33 U.S.C. 1342(b), 40 C.F.R. § 123.25.) The Porter-Cologne Act provides that permits issued subject to federal law must "ensure compliance with all applicable provisions of the [CWA and its implementing regulations], together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of

beneficial uses, or to prevent nuisance." (Cal. Water Code § 13377.) Petitioner contends that the receiving water limitations language fails to require attainment of water quality standards.

1. Contention: The receiving water limitations section fails to comply with the CWA and the Porter-Cologne Act because it does not prohibit discharges that "contribute to" as well as "cause" exceedances of water quality objectives as required by federal regulations.

Finding: The SWRCB agrees that the NPDES permit must prohibit discharges that "cause" or "contribute" to violations of water quality standards. Federal regulations specify requirements that must be included in each NPDES permit. (40 C.F.R. § 122.44.) Each NPDES permit must include limitations necessary to achieve water quality standards:

> "Limitations must control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality." (40 C.F.R. § 122.44(d)(1)(i).)[11] (Emphasis added.)

The receiving water limitations language of the Orange County NPDES permit requires the permittees to be responsible for those discharges that "cause continuing or recurring impairment of beneficial uses or exceedances of water quality objectives." To comply with the CWA, the phrase quoted in the immediately preceding sentence shall be interpreted so as to require permittees to control discharges that contribute to exceedances

[11] This provision applies to state programs. See 40 C.F.R. section 123.25.

of water quality objectives. Of course such contributions would have to be substantial (in more than a *de minimis* amount) contributions.

2. Contention: The petitioner contends that the receiving water limitations section in the permit violates the CWA and implementing regulations because it does not require compliance with water quality standards. The permit states that the permittees "will not be in violation of [receiving water limitations] so long as they are in compliance with the requirements" for evaluating the DAMP.

Finding: The SWRCB disagrees with petitioner's contention. In SWRCB Order WQ 96-13, the SWRCB reviewed and approved the storm water permit for certain permittees in the Santa Clara Valley issued by the San Francisco Bay Regional Water Board. The Santa Clara Valley permit contains a receiving water limitations section that specifically prohibits discharges that cause or contribute to a violation of water quality objectives, and states that the permittees "shall comply . . . through the timely implementation of control measures and other actions to reduce pollution in the discharge." (Emphasis added.) The receiving water limitations provision in the Orange County permit prohibits discharges that cause exceedances of water quality objectives, and states that the "permittees will not be in violation of this provision so long as they are in compliance with the requirements" for evaluating and improving the effectiveness of the DAMP. The Orange County permit receiving water limitations section is not, as a practical matter, different than the Santa Clara Valley permit approved by this SWRCB. In each case, compliance with the receiving water limitations is achieved by following a

procedure to evaluate and improve the BMPs where necessary to comply with water quality standards.

The SWRCB has already determined that the use of BMPs to achieve both the technology-based effluent limitations and the water quality-based effluent limitations complies with the CWA and the Porter-Cologne Act. See SWRCB Order WQ 91-03. Accordingly, the SWRCB agrees that use of the phrase that the "permittees will not be in violation of . . ." complies with the CWA and, in fact, used that same phrase in SWRCB Water Quality Order 97-03-DWQ (Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities, NPDES General Permit No. CAS000001) (the General Industrial Permit).

3. Contention: The petitioner contends that the receiving water limitations provision violates the CWA and implementing regulations because the mechanism for determining exceedances of receiving water limitations is unworkable and, therefore, would not result in achievement of water quality standards. The permittees are not considered to be in violation of receiving water limitations as long as the process for evaluating the DAMP are followed. This process, however, will not result in achievement of water quality standards because (1) it is very difficult to demonstrate that urban runoff has "caused" an exceedance of water quality objectives; (2) Regional Water Board staff stated at the Board hearing at which the permit was adopted that there were inadequate resources to oversee the storm water program; (3) the permit does not require submittal of information on the adequacy of the DAMP until after the Executive Officer determines that the plan will not result in achievement of water quality objectives;

and (4) the permit places no time schedule on review of the adequacy of the plan to meet water quality standards. The permit does not require any change to the DAMP until directed by the Executive Officer. Due to these limitations, water quality standards are not likely to be achieved.

Finding: Petitioner has raised legitimate concerns. As discussed above, permittees will be required to control discharges that contribute to exceedances of water quality objectives. The SWRCB's charge under Water Code section 13320 is to determine whether the Regional Water Board has acted appropriately. In this case, the Regional Water Board has directed its Executive Officer to determine when receiving water limitations have been exceeded. In order for such determinations to be made the Executive Officer must devote sufficient resources to make such determinations in a timely manner. Provided this is the case, it can be concluded that the permit is adequate to achieve water quality standards. This conclusion to uphold the permit language is further predicated on the fact that to do otherwise would result in two inconsistent storm water permits for Orange County.

III. ADDITIONAL ISSUES

While upholding the permit as appropriate, the SWRCB has concerns that future storm water permits contain the strongest and clearest possible language to protect water quality. As evidenced by the discussion at the January 7, 1998 workshop review of this petition, there are serious disagreements as to how best to ensure such protection. A review of the record leads to the following conclusions:

- Future storm water permits should contain consistent requirements to ensure water quality protection.
- Such permits must comply with CWA and Porter-Cologne Water Quality Control Act requirements.
- Storm water permits must achieve compliance with water quality standards, but they may do so by requiring implementation of BMPs in lieu of numeric water quality-based effluent limitations.
- Permittees must ultimately be responsible for evaluating and revising BMPs to achieve compliance with water quality standards.
- Permits should be written to clearly identify water quality standards and to clearly require that permittees, through the implementation of BMPs, shall not cause or contribute to exceedances of such water quality standards.
- Given the unique nature of the storm water discharges, it is reasonable that implementation take place, where appropriate, on a phased basis.
- Determinations that additional BMPs are necessary to achieve water quality standards should be based on findings by the permittees or the Regional Boards that storm water discharges are a substantial (in more than a *de minimis* amount) contributor to continuing or recurring exceedances of such standards.

Based upon these conclusions and as a precedent decision,[12] the following receiving water limitation language shall be included in future municipal storm water permits.

RECEIVING WATER LIMITATIONS

1. Storm water discharges and authorized non-storm water discharges to any surface or ground water shall not adversely impact human health or the environment.

2. The SWMP shall be designed and implemented, or shall be in the process of being revised in accordance with the procedures set forth below to ensure that discharges authorized by this permit shall not cause or substantially (in more than a *de minimis* amount) contribute to a continuing or recurring exceedance of any applicable water quality standards contained in a Statewide Water Quality Control Plan or the applicable Regional Water Quality Control Board's Basin Plan.

3. If the discharges cause or contribute to an exceedance of the applicable water quality standards, permittee shall take the following steps:

   a. Upon a determination by either the facility operator or the Regional Water Board that discharges are causing or contributing to an exceedance of an applicable water quality standard, the facility operator shall promptly notify and thereafter submit a report to the appropriate Regional Water Quality Control Board that describes BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of water quality standards. The report may be incorporated in the annual update to the SWMP unless the Regional Water Board directs an earlier submittal. The report shall include an implementation schedule. The Regional Water Quality Control Board may require modifications to the report;

   b. Submit any modifications to the report required by the Regional Board within 30 days of notification;

[12] In SWRCB Order WR 96-1, the SWRCB determined that water quality orders are precedent decisions. (See Gov. Code § 11425.60.)

c. Within 30 days following approval of the report described above by the Regional Water Quality Control Board, the facility operator shall revise its SWMP and monitoring program to incorporate the approved modified BMPs that have been and will be implemented, the implementation schedule, and any additional monitoring required;

d. Implement the revised SWMP and monitoring program in accordance with the approved schedule; and

e. Reduce pollutants in storm water discharges and authorized non-storm water discharges, following implementation of the SWMP revised in accordance with paragraph 3 above, to levels which shall not cause or contribute to an exceedance of any applicable water quality standards.

4. So long as permittees have complied with the procedures set forth in paragraph 3 above and are implementing the revised SWMP, they do not have to repeat the same procedure for continuing or recurring exceedances of the same receiving water limitations unless directed by the Regional Water Board to develope additional BMPs.

IV. CONCLUSIONS

After review of the record and consideration of the contentions of the petitioner, and for the reasons discussed above, we conclude:

1. The federal regulations implementing CWA section 402(p) require NPDES permits to prohibit discharges of pollutants that "cause or contribute" to exceedances of water quality standards and the permit will be so interpreted.

2. The specific portion of the receiving water limitations provision that states that "permittees will not be in violation of this provision so long as they are in compliance with the requirements" specifying the process for evaluating and improving the effectiveness of the DAMP complies with the CWA.

3. The Regional Water Board acted appropriately in adopting the permit.

4. Receiving water limitation provisions of future municipal storm water permits shall be consistent with this Order.

V. ORDER

IT IS ORDERED that Order 96-03 shall be interpreted as discussed above.

It is further ordered that in other respects, the petition is denied.

CERTIFICATION

The undersigned, Administrative Assistant to the Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on January 22, 1998.

AYE:	John Caffrey Marc Del Piero Mary Jane Forster John W. Brown
NO:	None
ABSENT:	James M. Stubchaer
ABSTAIN:	None

Maureen Marché
Administrative Assistant to the Board

EXHIBIT "8"

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

ORDER: WQ 2000 - 11

In the Matter of the Petitions of
THE CITIES OF BELLFLOWER, ET AL., THE CITY OF ARCADIA, AND WESTERN STATES PETROLEUM ASSOCIATION
Review of January 26, 2000 Action of the Regional Board
and
Actions and Failures to Act
by both the
California Regional Water Quality Control Board,
Los Angeles Region and Its Executive Officer
Pursuant to Order No. 96-054,
Permit for Municipal Storm Water and Urban Run-Off Discharges Within
Los Angeles County
[NPDES NO. CAS614001]

SWRCB/OCC FILES A-1280, A-1280(a) and A-1280(b)

BY THE BOARD:

On July 15, 1996, the Los Angeles Regional Water Quality Control Board (Regional Water Board) issued a revised national pollutant discharge elimination system (NPDES) permit in Order No. 96-054 (permit) to the 85 incorporated cities and the county within Los Angeles County (the County).[1] The permit covers storm water discharges from municipal separate storm sewer systems throughout the County.[2]

[1] This was the second storm water permit adopted for Los Angeles County and its cities. The first permit was the subject of an earlier Order. (In the Matter of Natural Resources Defense Council, Inc., Order WQ 91-04). In this permit, the County is designated as the Principal Permittee, and each city is designated as a permittee. The County is required to submit various documents on behalf of all of the permittees.
[2] The Regional Water Board has since issued a separate permit for one city, Long Beach. The relevant provisions of the Long Beach permit are similar to those in Order No. 96-054.

The permit contains provisions for the regulation of storm water discharges from development planning and construction.[3] Pursuant to these provisions, the County was required to submit Standard Urban Storm Water Mitigation Plans (SUSMPs).[4] The SUSMPs are plans that designate best management practices (BMPs) that must be used in specified categories of development projects. The County submitted SUSMPs, but the Regional Water Board approved the SUSMPs only after making revisions. The Executive Officer issued the revised SUSMPs on March 8, 2000.[5]

On February 25, 2000, the State Water Resources Control Board (State Water Board or Board) received a petition for review of the actions and failures to act regarding the SUSMPs from a number of cities, the Building Industry Association of Southern California and the Building Industry Legal Defense Foundation (jointly referred to as Cities). A second petition was received from the City of Arcadia. And a third petition was received from the Western States Petroleum Association (WSPA). On April 7, 2000, the petitioners filed amendments to their petitions, concerning the March 8, 2000 issuance of the SUSMPs. The Cities' amendment also revised the list of cities included in the petition. The Cities' petition now includes 32 cities. The petitions are legally and factually related, and have therefore been consolidated for purposes of review.[6] The petitioners also requested a stay of the SUSMPs. This request was denied by letter, dated May 11, 2000.

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[3] Permit, Part 2.III. These provisions focus more on post-construction impacts of development than on discharges from construction activities.
[4] Permit, Part 2.III.A.1.c.
[5] These are referred to herein as the Final SUSMPs. The Final SUSMPs also apply to Long Beach, even though it is subject to a separate permit.
[6] Cal. Code of Regs., tit. 23, section 2054.

On June 7 and 8, 2000, the Board held a hearing in Torrance. Several entities, including the petitioners, the Regional Water Board, and several environmental groups[7], were designated parties. The evidence from that hearing has been included in the record before the Board. The record for comments on the petition was kept open until the end of the hearing. The parties were allowed to submit post-hearing briefs.[8]

I. BACKGROUND

In prior Orders[9] this Board has explained the need for the municipal storm water programs and the emphasis on BMPs in lieu of numeric effluent limitations. The emphasis for preventing pollution from storm water discharges is still on the development and implementation of effective BMPs, but with the expectation that the level of effort will increase over time. In its Interim Permitting Approach[10], the United States Environmental Protection Agency (U.S. EPA) stated that first-round permits should include BMPs, and expanded or better-tailored BMPs in subsequent permits where necessary to attain water quality standards. Dischargers, consultants, and academic institutions in California and nationwide have conducted numerous studies on the effectiveness of BMPs and appropriate design standards. While many questions are still

[7] The environmental groups are Natural Resources Defense Council, Inc., Santa Monica BayKeeper, and Heal the Bay.

[8] There are several documents that were not timely received and, therefore, are not made a part of the record before the Board. The hearing notice specified that all evidence from parties must be received by May 31, 2000. The Regional Water Board submitted documents on June 6, 2000. The hearing notice specified that policy statements were due by the close of the hearing. Several comment letters were received June 12, 13, and 19, 2000. None of these submittals are a part of the record. The post-hearing briefs were subject to a 10-page limit. The environmental groups submitted objections to the post-hearing brief submitted by the Cities. First, the environmental groups challenge the length of the brief. All briefs were subject to a 10-page limit. The Cities submitted a 10-page brief, with a 22-page attachment showing extensive proposed revisions to the SUSMPs. This submittal violates the page limit, and only the brief is considered part of the record. Second, the environmental groups claim that an e-mail message referred to by the petitioners is subject to attorney-client privilege and should not have been used in this hearing. This e-mail message, from the Regional Water Board's counsel to one of its engineers, was placed in the Regional Water Board's administrative record and submitted to the State Water Board. Any privilege that may have attached to the message has been waived and no longer exists. Finally, the post-hearing brief from the City of Arcadia was received late and will not be considered. Documents submitted late for interim deadlines (such as the deadline for submitting responses to the petitions), have been included in the record.

[9] See, especially Orders WQ 91-03 (In the Matter of Citizens for a Better Environment et al.) and WQ 91-04.

[10] Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits. (61 Federal Register 57425.)

outstanding, more is expected of municipal dischargers, and many are implementing more effective programs.

While storm water management plans are improving, our knowledge of the impacts is also growing. Urban runoff has been determined to be a significant contributor of impairment to waters throughout the state. In Los Angeles specifically, beach closures are sometimes associated with urban runoff. In adopting the SUSMPs, the Regional Water Board took note of the urgent need for preventing further pollution from urban runoff and storm water discharges.

It is important to emphasize the role of the SUSMPs within the totality of regulating storm water discharges, and the purpose of these particular control measures. The requirement to prepare SUSMPS was part of the development controls in the permit. In addition to development controls, the permit requires education, public outreach, programs to restrict illicit connections and discharges, and controls on public facilities. In the context of the entire effort required by the permit, the development controls can be seen as preventing the existing situation from becoming worse.

The Final SUSMPs include a list of mandatory BMPs for nine categories of development. There are provisions that are applicable to all categories and lists of BMPs for individual categories. Requirements applicable to all categories include provisions to limit erosion from new development and redevelopment, requirements to conserve natural areas, protection of slopes and channels, and storm drain stenciling. Examples of BMPs specific to categories of discharge include design of loading docks for commercial projects and design of fueling areas for retail gasoline outlets. In most respects, the Final SUSMPs were similar to those proposed by the County. The significant departures were the inclusion of a numeric design standard for structural or treatment control BMPs, and the inclusion of certain types of projects that were not

covered in the County's proposal. The design standard creates objective and measurable criteria for the amount of runoff that must be treated or infiltrated by BMPs.

The record indicates that the purpose of the development controls, including the SUSMPs, is not simply to prevent pollution associated with construction runoff. As the petitioners point out, construction discharges are already subject to this Board's Statewide Construction Permit. The development controls in the SUSMPs, on the other hand, focus on post-construction runoff. They are aimed at limiting not just the pollutants in runoff from the new development, but also the volume of runoff that enters the municipal storm sewer system. By limiting runoff from new development, the SUSMPs prevent increased impacts from urban runoff generally. There is adequate technical information in the record to show that by controlling the volume of runoff from new development, BMPs can be effective in reducing the discharge of pollutants in storm water runoff.

The Procedure for Adopting the SUSMPs

The permit requires a program for controls on Development Planning and Construction. It involved a number of submissions by the County in consultation with the Cities. The first step was submission of a checklist for determining priority projects and exempt projects. The checklist was due on January 30, 1998. A list of recommended BMPs for development projects was also due on that date. The SUSMPs were due within six months of approval of the BMP list, and were to incorporate BMPs for certain categories of development. Following approval of the SUSMPs, the cities and County were to implement development programs for priority projects, consistent with the BMP list and the SUSMPs.

The BMP list was not approved until April 22, 1999. Thereafter, the County submitted proposed SUSMPs on July 22, 1999. The Regional Water Board held a public workshop on

August 10, 1999. Following the workshop, the County submitted revisions to the SUSMPs on August 12, 1999. On August 16, 1999, the Regional water Board gave notice that it would discuss the SUSMPs in a public meeting on September 16, 1999. There was significant discussion at that meeting regarding the intent of the Executive Officer to approve the SUSMPs, but with revisions including a numeric design standard. At the conclusion of the meeting, the Regional Water Board members asked the Executive Officer to revise the SUSMPs and bring them back to another meeting. On December 7, 1999, the Executive Officer circulated revised SUSMPs for public review. This document incorporated a numeric design standard and made other revisions to the permittees' proposal. The Regional Water Board held a hearing on the SUSMPs on January 26, 2000. At that meeting, the Regional Water Board endorsed the SUSMPs revised by the Executive Officer, but directed him to make further changes. The Executive Officer issued the Final SUSMPs on March 8, 2000.

The Contents of the Final SUSMPs

The permit provides that the SUSMPs must incorporate the appropriate elements of the BMP list and, at a minimum, apply to seven development categories: 100-plus home subdivisions; 10-plus home subdivisions; 100,000-plus square foot commercial developments; automotive repair shops; retail gasoline outlets; restaurants; and hillside single-family dwellings.

The SUSMPs proposed by the County applied to these seven categories. Various BMPs applied to the different categories, and the SUSMPs contained narrative mitigation requirements for source control and treatment. The July proposals stated:

> "The development must be designed so as to mitigate (infiltrate and/or treat) the site runoff generated from impervious directly connected areas that may contribute pollutants of concern to the storm water conveyance system."

There were no numeric design criteria for mitigation. According to various participants, earlier County drafts had included design standards to mitigate flows from 0.6-inch storm events. But any numeric criteria had been removed from the version that was submitted.

In its revised SUSMPs, submitted on August 12, the County explained in its cover letter that the mitigation language did not mean that all runoff must be mitigated. Rather, the County's intent was to omit a numerical standard from the SUSMPs. The revised SUSMPs no longer referred to mitigation at all. Instead, the following language replaced the mitigation requirement:

> "The development must be designed so as to minimize, to the maximum extent practicable (MEP), the introduction of pollutants of concern that may result in significant impacts, generated from site runoff of directly connected impervious areas (DCIA), to the storm water conveyance system as approved by the building official."

The Final SUSMPs, as approved by the Executive Officer and the Regional Water Board, included several revisions from the County's submittal. The revision that is of greatest concern to the petitioners is the addition of Design Standards for Structural or Treatment Control BMPs.[11] The design standards require that developments subject to the SUSMPs shall be designed to mitigate storm water runoff (by treatment or infiltration) from one of the following:

> "1. The 85th percentile 24-hour runoff event determined as the maximized capture storm water volume for the area..., or
> 2. The volume of annual runoff based on unit basin storage water quality volume, to achieve 80 percent or more volume treatment..., or
> 3. The volume of runoff produced from a 0.75 inch storm event, prior to its discharge to a storm water conveyance system, or
> 4. The volume of runoff produced from a historical-record based reference 24-hour rainfall criterion for "treatment" (0.75 inch average for the Los Angeles County area) that achieves approximately the same reduction in pollutant loads achieved by the 85th percentile 24-hour runoff event."

[11] The Final SUSMPs also include the narrative language quoted from the County's August 22, 1999 proposal.

The Final SUSMPs also applied to two additional categories of development: parking lots over 5,000 square feet or with 25 or more spaces and exposed to storm water, and to developments in environmentally-sensitive areas. Other revisions included application to all projects in the categories instead of discretionary projects only and the definition of redevelopment.

II. CONTENTIONS AND FINDINGS[12]

Contention: The petitioners contend that the Regional Water Board erred in not complying with the Administrative Review Process within the permit, and acted arbitrarily and capriciously and in violation of the Clean Water Act and state law.

Finding: The permit required the County, in consultation with the cities subject to the permit, to submit SUSMPs. The permit includes some general minimum requirements for the SUSMPs.[13] The Executive Officer is granted authority to approve the SUSMPs.[14]

The permit also contains an administrative review process.[15] The permit states that the administrative review process "formalizes the procedure for review and acceptance of reports and documents" and "provides a method to resolve any differences in compliance expectations between the Regional Board and Permittees, prior to initiating enforcement action."[16] Following this introductory statement, the permit includes two procedures. The first is for review and approval or disapproval of reports and documents. The second is the dispute resolution section that must be followed prior to enforcement action.

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[12] This Order does not address all of the issues raised by the petitioners. The Board finds that the issues that are not addressed are insubstantial and not appropriate for State Water Board review. (See *People v. Barry* (1987) 194 Cal.App.3d 158, [239 Cal.Rptr. 349], Cal. Code Regs., tit. 3, § 052.)

[13] Permit, Part 2, III.A.1.c.

[14] Permit, Part 2, III.A.2.

[15] Permit, Part 2, I.G.

[16] *Id.*

The process for review of documents that are subject to the Executive Officer's approval is that the Executive Officer will notify the permittees of the results of the review and approval or disapproval within 120 days. If the Executive Officer does not do so, the permittees must notify the Regional Water Board of their intent to implement the documents without approval. The Executive Officer then has 10 days to respond, or the permittees may implement the program and the Executive Officer may not make modifications.

The dispute resolution procedure is to be used when the Executive Officer determines that a permittee's storm water program is insufficient to meet the permit's provisions. The Executive Officer must send a "Notice of Intent to Meet and Confer" with the permittee. A meet and confer period then ensues, resulting in a written "Storm Water Program Compliance Amendment (SWPCA)." The permittee is provided time to comply with the SWPCA. The Executive Officer is not allowed to take enforcement action against a permittee until the Executive Officer notifies the permittee in writing that the administrative review process has been exhausted and that a violation exists warranting enforcement.

The petitioners contend that the Executive Officer failed to notify the permittees that their SUSMPs were inadequate within 120 days of its submittal. The petitioners also argue that, by revising the SUSMPs without pursuing the dispute resolution process, the Regional Water Board "violated" the terms of the permit.

The provision for review of documents, which clearly includes the SUSMPs, requires that the Executive Officer notify the permittees of the results of the review and approval or disapproval within 120 days. The County submitted the revised SUSMPs on August 12, 1999. Within 120 days, the Regional Water Board held a workshop where staff expressed their concerns with the SUSMPs. Also within 120 days the Regional Water Board itself held a public

meeting where there was extensive discussion and concern by board members that the SUSMPs did not include a numeric standard. And, prior to any notification by the permittees that they would proceed with implementing their SUSMPs, the Regional Water Board held a hearing January 26, 2000, where it directed the Executive Officer to issue the SUSMPs with revisions. The Executive Officer did so on March 8, 2000.

It is clear from the record that the Executive Officer, and the Regional Water Board itself, did inform the permittees that the SUSMPs were inadequate. There was no requirement for a specific form for expressing disapproval of documents. The extensive discussion and meetings on the need for revisions to the SUSMPs, and the Executive Officer's approval of revised SUSMPs, plainly refutes the allegation that the Regional Water Board never notified the permittees of its disapproval of the County's proposed SUSMPs.

The permittees also claim that the Regional Water Board "violated" the permit by failing to institute the meet and confer process.[17] The dispute resolution process, which includes meet and confer, did not apply to the decision to disapprove the proposed SUSMPs. That process is only required when the Regional Water Board ultimately takes an enforcement action against a permittee. It is separate from the process for review and approval or disapproval of documents, and does not even appear to relate to possible enforcement actions for submission of inadequate documents. This is illustrated by the fact that the provision regarding documents refers to submittals from both the Principal Permittee and the individual permittees, while the dispute resolution provision refers only to the permittees. This distinction is relevant because the County is charged with submitting the documents, while the individual permittees are responsible for compliance. A fair reading of the entire section on the administrative review process is that the

[17] We note that permits are issued to permittees to allow discharges to waters of the state. It is only permittees, and not Regional Water Boards, who can be charged with violating permits.

review and approval or disapproval of documents applies to submission of documents by the County on behalf of the cities, while the dispute resolution process applies to enforcement actions against any permittees for failing to implement adequate programs.

Contention: The petitioners contend that the Regional Water Board was not authorized to revise the SUSMPs to add more stringent requirements.

Finding: The petitioners contend that the mitigation standards in the SUSMPs are more stringent than the requirement in the permit to reduce pollutants in storm water runoff to the maximum extent practicable (MEP)[18]. The issue of what level of protection constitutes MEP will be discussed *Infra*, in the discussion of the reasonableness of the numeric standards. But the petitioners also make certain procedural claims on this point. They argue that in approving the BMP list, the Regional Water Board determined that those BMPs constituted MEP and that the Board could not add additional BMPs in the SUSMPs. They also contend the Regional Water Board itself had no authority to "usurp" the Executive Officer's role in reviewing the SUSMPs.[19] Finally, the petitioners contend that the Regional Water Board was not authorized to mandate a program for the permittees without amending the permit.

The permit requires the County to submit a list of BMPs for approval. The Regional Water Board approved this list. Following approval of the list, the County was required to submit the SUSMPs, which must "incorporate the appropriate elements of the recommended BMPs list."[20] The petitioners contend that by approving the list, the Regional Water Board determined that those BMPs constituted MEP, and that under the terms of the permit the Regional Water Board could not require additional BMPs.

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[18] The technology-based standard for controls under municipal storm water permits is MEP. For a fuller discussion of this standard, see Order WQ 91-03.
[19] It is undisputed that, at its January 26, 2000 meeting, the Board directed the Executive Officer to make additional revisions to the SUSMPs.
[20] Permit, Part 2, III.A.1.c.

In addressing this contention, we face what appears to be a fundamental misunderstanding of the numeric design standards on the part of the petitioners. The design standards are objective criteria that developers must achieve in designing their BMPs. The design standards are not separate BMPs. The standards tell what magnitude of storm event the BMPs must be designed to treat or infiltrate. They do not specify the BMPs that must be employed.

The SUSMPs as submitted by the County specify BMPs for various categories of development. Many of these BMPs are designed to minimize the pollutants in storm water runoff, by reducing flow through infiltration or by treatment. Examples of BMPs proposed by the County include infiltration basins and trenches, oil/water separators, and media filtration. The County's proposed SUSMPs also included language requiring minimizing the introduction of pollutants to the storm water conveyance system. That language remains unchanged in the Final SUSMPs. The only significant difference between the two versions of the SUSMPs was that the Regional Water Board established numeric criteria for designing the BMPs.

In adopting the Final SUSMPs, the Regional Water Board based its decision on the MEP standard.[21] The Regional Water Board did not significantly revise the BMP list or specify further the actions that developers must take to comply with the SUSMPs. Thus, we find that the Regional Water Board did not inappropriately revise its determination of what constituted MEP.

The Regional Water Board is the political body responsible for water quality control in the Los Angeles region.[22] While the Regional Water Board may delegate specified powers and duties to its Executive Officer,[23] it can at any time act on its own behalf. The fact that the Board authorized its Executive Officer to approve the SUSMPs in the permit did not mean that the Board thereby denied itself the opportunity to provide direction to the Executive Officer in his

[21] Resolution R-00-02.
[22] Water Code sections 13200 and 13225.
[23] Water Code section 13223.

approval. Such an interpretation of its delegation authority would result in an improper failure of the Board to assume responsibility for water quality in the region.

We also find that the Regional Water Board was authorized to revise the SUSMPs to achieve compliance with the permit's requirements. The SUSMPs are a part of implementation of the permit. Because the permit regulates storm water discharges throughout the entire Los Angeles region and it is implemented by 85 cities and the County, it is obvious that the permit could not spell out every detail of the program for the five-year term of the permit. Instead, the implementation is through the submission, review and approval, and implementation of various programs, including the SUSMPs.[24] Where it receives a submission that it finds is not consistent with the requirements of the permit, it is reasonable for the Regional Water Board to be able to require revisions. The Regional Water Board is not required to amend the permit each time it approves a submittal or approves a submittal with revisions. On the other hand, if the Regional Water Board's action in requiring revisions is inconsistent with the terms of the permit, then the Board should not act without first amending the permit. While the Regional Water Board could have required the County to make the revisions rather than making them itself, we see no harm in the Regional Water Board's approach.

As will be discussed below, in most respects the Final SUSMPs are consistent with the permit. But there are some portions of the SUSMPs that are not consistent, and in those cases the SUSMPs provisions are further revised in this Order.

Contention: The petitioners make various procedural claims, including that they were denied due process, and that the Regional Water Board violated the Administrative Procedure

[24] A fuller discussion of the use of storm water management plans to incorporate a developing program is found in Order No. WQ 91-03.

Act, the California Environmental Quality Act (CEQA), and the California Constitution, Article XIII B, section 6 (regarding state mandates).

Finding: The petitioners point out that at the January 26, 2000 Regional Water Board hearing, there was some confusion over late changes to the SUSMPs and they contend they were not provided adequate opportunity to comment. There was significant discussion of the SUSMPs over several months. We do not agree with the petitioners that a program of this magnitude must necessarily take years to develop. But we are concerned that at the January 26, 2000 hearing, interested persons and permittees were not given adequate time to review late revisions or to comment on them. Given the intense interest in this issue, the Regional Water Board should have diverged from its strict rule limiting individual speakers to three minutes and conducted a more formal process. Such a process should provide adequate time for comment, including continuances where appropriate.[25] But to the extent the Regional Water Board's process caused any harm, this Board cured those harms. We held a two-day hearing in Los Angeles County, where all parties were allowed significant time to present their positions and testimony. In addition, we allowed the introduction of new evidence that had not been presented to the Regional Water Board. At this point, all parties have been afforded a full opportunity to review the Final SUSMPs, to present their positions and evidence, and to engage in cross-examination. The petitioners' due process rights have been protected.

The Board has already addressed the contentions regarding compliance with other laws in prior decisions. The Administrative Procedure Act exempts the adoption of permits from its requirements.[26] While the SUSMPs are not a permit, they are implementing documents for a

[25] For future adjudicative proceedings that are highly controversial or involve complex factual or legal issues, we encourage regional water boards to follow the procedures for formal hearings set forth in Cal. Code of Regs., tit. 23, section 648 et seq.

[26] Government Code section 11352; See, Order No. 95-4 (In the Matter of the City and County of San Francisco).

permit, and are therefore subject to the exemption. Moreover, they are relevant only to this permit, and are not a general rule of application. The constitutional provisions regarding state mandates also do not apply to NPDES permits.[27] As will be explained below, the SUSMPs as revised herein, are consistent with MEP and therefore are federally mandated. The provisions of CEQA requiring adoption of environmental documents also do not apply to NPDES permits.[28] Again, as an implementing document for the permit, there is no requirement for a separate CEQA analysis.[29]

Contention: The petitioners contend that the SUSMPs do not properly apply the maximum extent practicable standard.

Finding: The permit, consistent with Clean Water Act section 402(p)(3)(B)(iii), requires controls to reduce the discharge of pollutants to the maximum extent practicable, or MEP.[30] In approving the Final SUSMPs, the Regional Water Board acknowledged that one of the primary objectives of the municipal storm water program is the requirement to reduce the discharge of pollutants from storm water conveyance systems to the MEP.[31] While all parties appear to agree that the standard for the SUSMPs is MEP, they disagree about what level of effort is necessary to comply with that standard.

The petitioners approach this issue from two angles. First, they contend that the SUSMPs will not provide water quality benefits that reflect MEP. Second, they contend that there could be adverse impacts on groundwater quality that have not been adequately evaluated.

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[27] See, Order No. WQ 90-3 (In the Matter of San Diego Unified Port District).
[28] Water Code section 13389.
[29] We do note with interest the environmental groups' comment that if the permittees believed it was necessary to comply with the APA and CEQA prior to adoption of the SUSMPs, then they themselves would have violated those acts in their submissions of the proposed SUSMPs.
[30] Permit, Finding 13.
[31] Final SUSMPs, at page 2; Resolution No. R-00-02, at page 3.

Storm Water Design Standards as MEP

In adopting the Final SUSMPs, the Regional Water Board found that many rivers and streams in Los Angeles County are impaired for pollutants found in storm water and urban runoff, and that storm water runoff carries pollutants from nearly all types of developed properties.[32] Pollutant loading from the aggregate of development in the basin results in impairments from sediments, metals, complex organic compounds, oil and grease, nutrients, and pesticides.[33] The Final SUSMPs reflect two goals: to reduce the amounts of these pollutants in runoff and to reduce the ability of runoff to act as a conveyance system to deliver more pollutants to receiving waters. The Final SUSMPs, which include lists of BMPs and design standards requiring treatment or infiltration, address these two goals.

Clean Water Act section 402(p)(3)(B)(iii), which sets forth the requirements for establishing MEP in municipal storm water permits, provides that such permits "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants." The United States Environmental Protection Agency (U.S. EPA), in a guidance document, explains that BMPs should be used in first-round storm water permits, and "expanded or better-tailored BMPs in subsequent permits, where necessary, to provide for the attainment of water quality standards."[34] The Clean Water Act, as interpreted by U.S. EPA, does require that, in a second-round permit,[35] expanded BMPs may be appropriate. In light of the number of water

[32] Resolution No. R-00-02.
[33] *Id.*
[34] Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits, 61 Federal Register 57425 (1996).
[35] The original permit was issued in 1990. The 1996 permit is a second-round permit.

bodies impaired by runoff in Los Angeles County, it was appropriate to expand the scope of BMPs during the permit term.

The regulations implementing section 402(p) specifically require municipalities to have controls to reduce the discharge of pollutants from their storm sewer systems that "receive discharges from areas of new development and significant redevelopment," including post-construction discharges.[36] Clearly, it was appropriate for the Regional Water Board to require BMPs for new development and significant redevelopment. The permittees, who submitted their own version of SUSMPs with listed BMPs for categories of development, appear to have no real quarrel with this general mandate.

This Board has already endorsed requirements to limit the flow of the "first flush" of storm water, which may contain more significant pollutants.[37] The permittees' own version of the SUSMPs required mitigation of storm water runoff by treatment or infiltration, thus conceding the propriety of these two approaches to lessening the impact of storm water discharges. The crux of the disagreement is that the Regional Water Board added numeric design standards to establish the amount of runoff that must be treated or infiltrated, and required the mandatory application of these standards to categories of development.

The addition of measurable standards for designing the BMPs provides additional guidance to developers and establishes a clear target for the development of the BMPs. The U.S. EPA guidance manual suggests the use of design criteria and performance standards for post-construction BMPs.[38] The numeric criteria the Regional Water Board adopted essentially

[36] 40 CFR section 122.26(d)(2)(iv)(A)(2).
[37] In the Matter of National Steel and Shipbuilding Company, et al., Order WQ 98-07, at slip opinion 7.
[38] Guidance Manual for the Preparation of Part 2 of the NPDES Permit Applications for Discharges from Municipal Separate Strom Sewer Systems, at page 6-4 (November 1992).

requires that 85 percent of the runoff from the development be infiltrated or treated.[39] In adopting these standards, the Regional Water Board based its decision on a research review of standards in other states and a statistical analysis of the rainfall in the area. The standard was set to gain the maximum benefit in mitigation while imposing the least burden on developers.[40] In light of the evidence of the use of this or more stringent standards in other states, the expert testimony supporting this standard, the endorsement by U.S. EPA in its comments, and the cost-effectiveness of its implementation (discussed below), the Regional Water Board acted appropriately in determining that the standards reflect MEP.[41]

We also find that the Regional Water Board appropriately applied these standards to seven of the categories listed in the SUSMPs: single-family hillside residences, 100,000 square foot commercial developments, automotive repair shops, restaurants, home subdivisions with 10 to 99 housing units, home subdivisions with 100 or more housing units, and parking lots with 5,000 square feet or more or with 25 or more parking spaces and potentially exposed to storm water runoff.[42] These categories, except for parking lots, were already targeted for special treatment in the permit. The evidence shows that each listed category can be a significant source of pollutants and/or runoff following development. It is appropriate that the design standards apply so that BMPs for these categories of development result in the infiltration or treatment of a significant about of the runoff.

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[39] Four different methods of calculation are permitted, so the percentage of capture may vary slightly.

[40] At the hearing in this matter, Regional Water Board staff explained that the standard was set at the bottom of the "knee" of the curve where the benefits of the mitigation requirements decrease and the cost increases. Other states have set the standard higher along this curve, requiring 90 to 95 percent mitigation.

[41] This conclusion in no way departs from our acceptance of BMPs in lieu of numeric effluent limitations in storm water permits. (See, e.g., Order WQ 91-03 and Order WQ 91-04.) The numeric standard is a design standard for BMPs. It does not quantify or limit the pollutants in the effluent. It also does not specify which of the listed BMPs must be employed.

[42] As discussed below, this Board is revising the SUSMPs to delete the application of the design standards to retail gasoline outlets and to locations within or directly adjacent to or discharging directly to environmentally-sensitive areas.

Potential Impacts on Ground Water

The petitioners contend that infiltration of runoff may lead to ground water pollution, and that the Regional Water Board did not properly consider such potential impacts. The mitigation standards provide for a waiver where there is a risk of ground water contamination because a known unconfined aquifer lies beneath the land surface or an existing or potential underground source of drinking water is less than ten feet from the soil surface.[43] The Final SUSMPs also include a discussion on how to use infiltration so that the risk of contamination of groundwater is reduced, and where infiltration is not appropriate.[44]

The Regional Water Board did consider the potential impacts to groundwater from infiltration, and included appropriate limitations and guidance on its use as a BMP. These provisions will ensure adequate protection of groundwater from any adverse impacts due to infiltration.

Contention: The petitioners contend the Regional Water Board failed to show that the SUSMPs as adopted are cost-effective and that the benefits to be obtained outweigh the costs.

Finding: The petitioners refer to the Preamble to the Phase II storm water regulations[45] as the basis for their economic argument. The quoted language, however, does not wholly support the petitioners' contention. The Preamble states that President Clinton's Clean Water Initiative clarifies "that the maximum extent practicable standard should be applied in a site-specific, flexible manner, taking into account cost considerations as well as water quality effects."[46] It is clear that cost should be considered in determining MEP; this does not mean that

[43] Final SUSMP, page 14.
[44] *Id.*, at page 15.
[45] 64 Federal Register 68722 and following. These regulations do not apply to the permit, but the general language on MEP is relevant to EPA's interpretation of the standard.
[46] 64 Federal Register 68722, 68732 (December 8, 1999).

the Regional Water Board must demonstrate that the water quality benefits outweigh the economic costs.

While the standard of MEP is not defined in the storm water regulations or the Clean Water Act, the term has been defined in other federal rules. Probably the most comparable law that uses the term is the Superfund legislation, or CERCLA, at section 121(b). The legislative history of CERCLA indicates that the relevant factors, to determine whether MEP is met in choosing solutions and treatment technologies, include technical feasibility, cost, and state and public acceptance.[47] Another example of a definition of MEP is found in a regulation adopted by the Department of Transportation for onshore oil pipelines. MEP is defined as to "the limits of available technology and the practical and technical limits on a pipeline operator . . . ."[48]

These definitions focus mostly on technical feasibility, but cost is also a relevant factor. There must be a serious attempt to comply, and practical solutions may not be lightly rejected. If, from the list of BMPs, a permittee chooses only a few of the least expensive methods, it is likely that MEP has not been met. On the other hand, if a permittee employs all applicable BMPs except those where it can show that they are not technically feasible in the locality, or whose cost would exceed any benefit to be derived, it would have met the standard. MEP requires permittees to choose effective BMPs, and to reject applicable BMPs only where other effective BMPs will serve the same purpose, the BMPs would not be technically feasible, or the cost would be prohibitive. Thus while cost is a factor, the Regional Water Board is not required to perform a cost-benefit analysis.

In reviewing the record, it is apparent that the Regional Water Board did evaluate the cost of the SUSMPs. While the petitioners claim there is no evidence in the record to show the

[47] 132 Cong. Rec. H 9561 (Oct. 8, 1986).
[48] 49 CFR section 194.5.

SUSMPs are necessary and cost effective, the opposite is true. The record is replete with documentation of costs of pilot mitigation projects, studies from similar programs in other states, and research studies. The Regional Water Board complied with the requirement to consider cost.

The Regional Water Board found that the cost to include BMPs that will meet the mitigation criteria will be one to two percent of the total development cost. This amount appears reasonable, especially in light of the amount of impervious surface already in Los Angeles County and the impacts on impaired water bodies. In considering the cost of compliance, it is also important to consider the costs of impairment. The beach closures in the Los Angeles region, well documented in the evidence, have reached critical proportions. These beach closures clearly have a financial impact on the area, and should be positively affected by the SUSMPs.

We do note that there could be further cost savings for developers if the permittees develop a regional solution for the problem. We recommend that the cities and the County, along with other interested agencies, work to develop regional solutions so that individual dischargers are not forced to create numerous small-scale projects. While the SUSMPs are an appropriate means of requiring mitigation of storm water discharges, we also encourage innovative regional approaches.[49]

Contention: The petitioners have raised contentions regarding details of the SUSMPs, including the amount of time allowed for inclusion of SUSMPs in local ordinances, and their application to both "discretionary" and "non-discretionary" projects. In addition, during the hearing certain ambiguities in the wording of the Final SUSMPs became apparent, including the provisions regarding redevelopment and environmentally-sensitive areas. In this portion of the

[49] We note that the SUSMPs as written do not in any way preclude the development of regional solutions approved by the Regional Water Board as a means to comply with the BMP and design standard requirements.

Order we address these issues and also the application of the design standards to retail gasoline outlets (RGOs) and the waiver funding requirements.

Finding: The testimony at the hearing in this matter revealed that there are specific provisions of the SUSMPs that create confusion as to the types of development projects subject to the mitigation design standards. The petitioners also contend that application of the standards to specific types of development either is unreasonable or is inconsistent with the terms of the permit. The specific requirements are discussed below.

Retail Gasoline Outlets

Petitioner WSPA contends that RGOs should be excluded from the SUSMPs. Its petition raised the same general contentions as the other petitioners, but at the hearing WSPA presented evidence specific to RGOs. In particular, WSPA raised questions about the propriety of applying the design standards for BMPs to RGOs. In considering this issue, we conclude that construction of RGOs is already heavily regulated and that owners may be limited in their ability to construct infiltration facilities. Moreover, in light of the small size of many RGOs and the proximity to underground tanks, treatment may not always be feasible, or safe. The mandatory BMPs that are included in the SUSMPs may be adequate to achieve MEP at RGOs, but the Regional Water Board should add additional mandatory BMPs, such as use of dry cleanup methods (e.g. sweeping) for removal of litter and debris, use of rags and absorbents for leaks and spills, restricting the practice of washing down hard surfaces unless the wash water is collected and disposed of properly, annual training of employees on proper spill cleanup and waste disposal methods, and the inclusion of BMPs to address trash receptacle areas and air/water supply

areas.[50] We conclude that because RGOs are already heavily regulated and may be limited in their ability to construct infiltration facilities or to perform treatment, they should not be subject to the BMP design standards at this time, and recommend that the Regional Water Board undertake further consideration of a threshold relative to size of the RGO, number of fueling nozzles, or some other relevant factor. This Order should not be construed to preclude inclusion of RGOs in the SUSMP design standards, with proper justification, when the permit is reissued.

Redevelopment Projects

The SUSMPs were written to apply to new development and to some types of redevelopment in nine categories of projects. The definition of "redevelopment" reflected the intent of the Regional Water Board to define the scope of redevelopment projects subject to the requirements. That definition[51], however, was somewhat confusing, and it was apparent from testimony at the hearing that the parties had different understandings of the scope of redevelopment subject to the SUSMPs. In their post-hearing briefs, the various parties appeared to agree on the actual intent of the Regional Water Board in including redevelopment in the SUSMPs. This intent was to include redevelopment that adds or creates at least 5,000 square feet of impervious surface to the original development and, where the addition constitutes less than 50 percent of the original development, to limit the application of the BMP design standards to the addition.

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[50] These BMPs are from a list of BMPs in a publication of the California Storm Water Quality Task Force. (Best Management Practice Guide – Retail Gasoline Outlets. March 1997.) This publication includes BMPs in addition to those listed in the SUSMPs. All BMPs recommended in this publication should be mandated.

[51] The SUSMPs state: "Redevelopment" means, on an already developed site, the creation or addition of at least 5,000 square feet of impervious surfaces or the creation or addition of fifty percent or more of impervious surfaces or the making of improvements to fifty percent or more of the existing structure. Redevelopment includes, but is not limited to: the expansion of a building footprint or addition or replacement of a structure; structural development including an increase in gross floor area and/or exterior construction or remodeling; replacement of impervious surface that is not part of a routine maintenance activity; and land disturbing activities related with structural or impervious surfaces.

While some parties requested further requirements for development, it appears that the Regional Water Board's original intent was relatively simple to apply and results in a fair and appropriate application of the SUSMPs' requirements to redevelopment. Therefore, we will revise the definition in the SUSMPs accordingly.

Environmentally-Sensitive Areas

The permit required that the SUSMPs address at least seven development categories.[52] The final SUSMPs added two more categories: parking lots of 5,000 square feet or more or with 25 or more parking spaces and potentially exposed to storm water runoff; and location within or directly adjacent to an environmentally-sensitive area (ESA). The petitioners contend that the addition of ESAs was inappropriate because the permit refers only to "development categories"[53] and ESA is a location category.

Whether or not the Regional Water Board went beyond the permit's terms in including this category, we find a fundamental problem with the language of the SUSMPs regarding ESAs. All of the other categories are relatively simple to apply because they describe the types of development that fall within the category. For instance, the threshold for a commercial development is 100,000 square feet. If the development is smaller, it is not subject to the SUSMPs. But for developments within ESAs, the SUSMPs contain no threshold. This absence led to speculation by the petitioners that something as small as a new patio on a home in an ESA would make the SUSMPs applicable. The Regional Water Board, at the hearing and in its post-hearing brief, conceded that there should be some threshold. While the Regional Water Board

[52] The categories listed in the permit are: single-family hill residences, 100,000 square-foot commercial developments, automotive repair shops, retail gasoline outlets, restaurants, home subdivisions with 10 to 99 housing units, and home subdivisions with 100 or more housing units. Permit, Part 2, III.A.1.c.
[53] *Id.*

did recommend a specific threshold, we believe that it is inappropriate for this Board to add a threshold that has not been fully discussed by all interested persons.

While it may be appropriate to include more stringent controls for developments in ESAs, we also note that such developments are already subject to extensive regulation under other regulatory programs. Moreover, in light of the permit language limiting the SUSMPs to development categories, ESAs are not an appropriate category within the SUSMPs. The Regional Water Board may choose to consider the issue further when it reissues the permit.

Discretionary and Non-Discretionary, or Ministerial, Projects

The petitioners contend that the SUSMPs should apply only to projects that are considered "discretionary" within the meaning of California Environmental Quality Act (CEQA).[54] They argue that the inclusion of non-discretionary, or ministerial, projects is inconsistent with the terms of the permit.

The permit provisions on development projects do refer to "discretionary" projects in several places. The permittees are directed to develop a checklist for determining priority and exempt projects.[55] Priority projects are defined as development and redevelopment projects requiring discretionary approval, which may have a potential significant effect on storm water quality.[56] The permittees are also required to develop a BMP list.[57] In developing the SUSMPs, the permittees are required to incorporate appropriate elements of the BMP list.[58] Next, the permittees must develop a program on planning control measures for priority projects (which are limited to projects requiring discretionary approval), consistent with the list of BMPs and the

[54] Public Resources Code section 21000 *et seq.*
[55] Permit, Part 2, III.A.1.a.
[56] *Id.*
[57] Permit, Part 2, III.A.1.b.
[58] Permit, Part 2, III.A.1.c.

SUSMPs.[59] The permit further states that, in order to assure compliance with these requirements, the permittees must develop guidelines on preparing CEQA documents that link mitigation conditions to "local discretionary project approvals."[60]

Taken as a whole, the provisions of the permit appear to link the development requirements for SUSMPs to developments that receive discretionary approval by local governments, as defined in CEQA. The SUSMPs are an implementation tool for the permit and must be consistent with the permit. While the limitation of the SUSMPs to discretionary projects may not be sufficiently broad for an effective storm water control program, the Regional Water Board acted inappropriately in expanding the SUSMPs to include non-discretionary projects. The Regional Water Board may consider expanding the development controls beyond CEQA discretionary projects when it reissues the permit. But at this time, the SUSMPs must be revised so that they are limited to development projects requiring discretionary approval within the meaning of CEQA.[61]

Waiver Funding Requirement

Where a waiver is granted from the design standard requirements, the Final SUSMPs provide that the permittee must require the project proponent to transfer the cost savings to a storm water mitigation fund. The fund is to be operated by a public agency or a non-profit entity, to promote regional or alternative solutions for storm water pollution in the same storm watershed. The petitioners contend that the funding requirement will create an additional administrative burden.

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[59] Permit, Part 2, III.a.2.
[60] Permit, Part 2, III.a.3.b.
[61] We note that the Final SUSMPs already include a definition of "discretionary project" consistent with the definition in the CEQA guidelines. Final SUSMPs at page 4 of 25; Title 14, California Code of Regulations, section 15357. Apparently this definition was inadvertently retained after the Regional Water Board decided to expand the SUSMPs beyond discretionary projects.

The concept of a mitigation fund or "bank" is a positive idea for obtaining regional solutions to storm water runoff. As a long-term strategy, municipal storm water dischargers should work to establish regional mitigation facilities, which may be more cost-effective and more technically effective than mitigation structures at individual developments. But at this point there are not sufficient resources in place to require all permittees to establish such funds or to find appropriate non-profit organizations. Before mandating funding, preliminary questions should be answered, including who will manage the fund, what types of projects it will be used for, what entities can legally operate such funds, and how permittees will determine the amount of the assessments. It would be appropriate for the County to consider developing a program with the appropriate flood control agency, or as a model for the separate cities to develop. There may be suitable agencies to administer such funds, but the development of programs may take some time. The Regional Water Board should consider adopting such a program when it reissues the permit, after consultation with the appropriate local agencies.

III. CONCLUSIONS

Based on the discussion above, the Board concludes that:

1. The Regional Water Board complied with the procedural requirements of the permit, including the Administrative Review Process, in approving the Final SUSMPs.
2. The Regional Water Board was authorized to revise the SUSMPs by including more stringent requirements than the permittees had proposed.
3. The Regional Water Board complied with did not violate the Administrative Procedure Act, CEQA, or the Constitutional provisions on state mandates. The petitioners' due process rights have been protected
4. The Regional Water Board considered the costs of the SUSMPs, and acted reasonably in requiring these controls in light of the expected benefits to water quality.

5. The Final SUSMPs reflect a reasonable interpretation of development controls that achieve reduction of pollutants in storm water discharges to the maximum extent practicable.
6. The SUSMPs include adequate protections of groundwater quality from any impacts from infiltration.
7. The SUSMPs will be revised to clarify the intent of the Regional Water Board and to make them consistent with the permit. Specifically, retail gasoline outlets should not be subject to the BMP design standards because they are already heavily regulated and may be limited in their ability to construct infiltration facilities or to perform treatment. Redevelopment projects should be subject to the SUSMPs only if they result in creation or addition of 5,000 square feet of impervious surfaces. Environmentally-sensitive areas should not be listed as a category in the SUSMPs. The SUSMPs should only apply to discretionary projects. The requirement for funding by project proponents who receive waivers should be deleted. The SUSMPs will be amended as shown in the attachment to this Order.
8. In light of the revisions of the SUSMPs made by this Order, and to allow the permittees adequate time to adopt implementing ordinances, the deadline for adopting ordinances will be revised to January 15, 2001, and the effective date of the Final SUSMPs will be revised to February 15, 2001.

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IV. ORDER

IT IS HEREBY ORDERED that the Standard Urban Storm Water Mitigation Plans for Los Angeles County and Cities in Los Angeles County is revised consistent with the amendments attached hereto. In all other respects the petitions are dismissed.

CERTIFICATION

The undersigned, Administrative Assistant to the Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on October 5, 2000.

AYE: Arthur G. Baggett, Jr.
Mary Jane Forster
John W. Brown

NO: None

ABSENT: Peter S. Silva

ABSTAIN: None

/s/
Maureen Marché
Administrative Assistant to the Board

AMENDMENTS TO SUSMPS

[These amendments are to the Final SUSMP, as published March 8, 2000]

Page 3 of 25

First full paragraph:

All **discretionary development and redevelopment** projects that fall into one of ~~seven~~ **the following** categories are ~~identified in the Los Angeles County MS4 Permit as requiring~~ **subject to these** SUSMPs. These categories are:

- Single-family Hillside Residences
- 100,000 Square Foot Commercial Developments
- Automotive Repair Shops
- Retail Gasoline Outlets
- Restaurants
- Home Subdivisions with 10 to 99 housing units
- Home Subdivisions with 100 or more housing units
- **Parking lots 5,000 square feet or more or with 25 or more parking spaces and potentially exposed to storm water runoff**

Second full paragraph:

~~The Regional Board Executive Officer has designated~~ ~~two~~ ~~additional categories~~ ~~subject to SUSMP requirements for the Los Angeles County MS4 Permit.~~ ~~These categories are:~~

- ~~Location within or directly adjacent to or discharging directly to an environmentally sensitive area, and~~
- ~~Parking lots 5,000 square feet or more or with 25 or more parking spaces and potentially exposed to storm water runoff~~

Fourth full paragraph:

Permittees shall amend codes, if necessary, not later than ~~September 8, 2000~~ **January 15, 2001**, to give legal effect to the SUSMP requirements. The SUSMP requirements for projects identified herein shall take effect not later than ~~October 8, 2000~~ **February 15, 2001**.

Page 4 of 25

Delete definition of "Environmentally Sensitive Area"

Revise Definition of "Redevelopment":

"Redevelopment" means, on an already developed site, the creation or addition of at least 5,000 square feet of impervious surfaces ~~or the creation or addition of fifty percent or more of impervious surfaces or the making of improvements to fifty percent or more of the existing structure~~. Redevelopment includes, but is not limited to: the expansion of a building footprint or addition or replacement of a structure; structural development including an increase in gross floor area and/or exterior construction or remodeling; replacement of impervious surface that is not part of a routing maintenance activity; and land disturbing activities related with structural or impervious surfaces. **Where redevelopment results in an increase of less than fifty percent of the impervious surfaces of a previously existing development, and the existing development was not subject to these SUSMPs, the Design Standards apply only to the addition, and not to the entire development.**

Page 10 of 25

Add to "Limited Exclusion": Retail Gasoline Outlets

Page 15 of 25

Delete the first full paragraph (storm water mitigation funding)

EXHIBIT "9"

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

ORDER WQ 2001-15

In the Matter of the Petitions of

BUILDING INDUSTRY ASSOCIATION OF SAN DIEGO COUNTY AND WESTERN STATES PETROLEUM ASSOCIATION

For Review Of Waste Discharge Requirements Order No. 2001-01
for Urban Runoff from San Diego County
[NPDES No. CAS0108758]
Issued by the
California Water Quality Control Board,
San Diego Region

SWRCB/OCC FILES A-1362, A-1362(a)

BY THE BOARD:

On February 21, 2001, the San Diego Regional Water Quality Control Board (Regional Water Board) issued a revised national pollutant discharge elimination system (NPDES) permit in Order No. 2001-01 (permit) to the County of San Diego (County), the 18 incorporated cities within the County, and the San Diego Unified Port District. The permit covers storm water discharges from municipal separate storm sewer systems (MS4) throughout the County. The permit is the second MS4 permit issued for the County, although the first permit was issued more than ten years earlier.[1]

[1] NPDES permits generally expire after five years, but can be extended administratively where the Regional Water Board is unable to issue a new permit prior to the expiration date. As the record in this matter amply demonstrates, the Regional Water Board engaged in an extensive process of issuing draft permits, accepting comments, and holding workshops and hearings since at least 1995.

The permit includes various programmatic and planning requirements for the permittees, including construction and development controls, controls on municipal activities, controls on runoff from industrial, commercial, and residential sources, and public education. The types of controls and requirements included in the permit are similar to those in other MS4 permits, but also reflect the expansion of the storm water program since the first MS4 permit was adopted for San Diego County 11 years ago.[2]

On March 23, 2001, the State Water Resources Control Board (State Water Board or Board) received petitions for review of the permit from the Building Industry Association of San Diego County (BIA) and from the Western States Petroleum Association (WSPA).[3] The petitions are legally and factually related, and have therefore been consolidated for purposes of review.[4] None of the municipal dischargers subject to the permit filed a petition, nor did they file responses to the petitions.

I. BACKGROUND

MS4 permits are adopted pursuant to Clean Water Act section 402(p). This federal law sets forth specific requirements for permits for discharges from municipal storm sewers. One of the requirements is that permits "shall require controls to reduce the discharge of pollutants to the maximum

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[2] For a discussion of the evolution of the storm water program, consistent with guidance from the United States Environmental Protection Agency (U.S. EPA), see Board Order WQ 2000-11.

[3] On March 23, the State Water Board also received brief letters from the Ramona Chamber of Commerce, the North San Diego County Association of Realtors, the San Diego County Apartment Association, the National Association of Industrial and Office Properties, and the California Building Industry Association. All of these letters state that they are "joining in" the petition filed by BIA. None of the letters contain any of the required information for petitions, which is listed at Cal. Code of Regs., tit. 23, section 2050. These letters will be treated as comments on the BIA petition. To the extent the authors intended the letters be considered petitions, they are dismissed.

[4] Cal. Code of Regs., tit. 23, section 2054.

extent practicable [MEP]." States establish appropriate requirements for the control of pollutants in the permits.

This Board very recently reviewed the need for controls on urban runoff in MS4 permits, the emphasis on best management practices (BMPs) in lieu of numeric effluent limitations, and the expectation that the level of effort to control urban runoff will increase over time.[5] We pointed out that urban runoff is a significant contributor of impairment to waters throughout the state, and that additional controls are needed. Specifically, in Board Order WQ 2000-11 (hereinafter, LA SUSMP order), we concluded that the Los Angeles Regional Water Board acted appropriately in determining that numeric standards for the design of BMPs to control runoff from new construction and redevelopment constituted controls to the MEP.[6]

The San Diego permit incorporates numeric design standards for runoff from new construction and redevelopment similar to those considered in the LA SUSMP order.[7] In addition, the permit addresses programmatic requirements in other areas. The LA SUSMP order was a precedential decision,[8] and we will not reiterate our findings and conclusions from that decision.[9]

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[5] Board Order WQ 2000-11.

[6] As explained in that Order, numeric design standards are not the same as numeric effluent limitations. While BIA contends that the permit under review includes numeric effluent limitations, it does not. A numeric design standard only tells the dischargers how much runoff must be treated or infiltrated; it does not establish numeric effluent limitations proscribing the quality of effluent that can be discharged following infiltration or treatment.

[7] The San Diego permit also includes provisions that are different from those approved in the LA SUSMP Order, but which were not the subject of either petition. Such provisions include the inclusion of non-discretionary projects. We do not make any ruling in this Order on matters that were not addressed in either petition.

[8] Government Code section 11425.60; State Board Order WR 96-1 (Lagunitas Creek), at footnote 11.

[9] BIA restates some of the issues this Board considered in the LA SUSMP order. For instance, BIA contends that it is inappropriate for the permit to regulate erosion control. While this argument was not specifically addressed in our prior Order, it is obvious that the most serious concern with runoff from construction is the potential for increased erosion. It is absurd to contend that the permit should have ignored this impact from urban runoff.

The petitioners make numerous contentions, mostly concerning requirements that they claim the dischargers will not be able to, or should not be required to, comply with. We note that none of the dischargers has joined in these contentions. We further note that BIA raises contentions that were already addressed in the LA SUSMP order. In this Order, we have attempted to glean from the petition issues that are not already fully addressed in Board Order Board Order WQ 2000-11, and which may have some impact on BIA and its members. WSPA restated the contentions it made in the petition it filed challenging the LA SUSMP order. We will not address those contentions again.[10] But we will address whether the Regional Water Board followed the precedent established there as it relates to retail gasoline outlets.[11]

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[10] On November 8, 2001, following the October 31 workshop meeting that was held to discuss the draft order, BIA submitted a "supplemental brief" that includes many new contentions raised for the first time. (Interested persons who were not petitioners filed comments on the draft order asking the State Water Board to address some of these.) The State Water Board will not address these contentions, as they were not timely raised. (Wat. Code § 13320; Cal. Code of Regs., tit. 23, § 2050(a).) Specific contentions that are not properly subject to review under Water Code section 13320 are objections to findings 16, 17, and 38 of the permit, the contention that permit provisions constitute illegal unfunded mandates, challenges to the permit's inspection and enforcement provisions, objections to permit provisions regarding construction sites, the contention that post-construction requirements should be limited to "discretionary" approvals, the challenge to the provisions regarding local government compliance with the California Environmental Quality Act, and contentions regarding the term "discharge" in the permit. BIA did not meet the legal requirements for seeking review of these portions of the permit.

[11] On November 8, 2001, the State Water Board received eight boxes of documents from BIA, along with a "Request for Entry of Documents into the Administrative Record." BIA failed to comply with Cal. Code of Regs., tit. 23, section 2066(b), which requires such requests be made "prior to or during the workshop meeting." The workshop meeting was held on October 31, 2001. The request will therefore not be considered. BIA also objected in this submittal that the Regional Water Board did not include these documents in its record. The Regional Water Board's record was created at the time the permit was adopted, and was submitted to the State Water Board on June 11, 2001. BIA's objection is not timely.

II. CONTENTIONS AND FINDINGS[12]

Contention: BIA contends that the discharge prohibitions contained in the permit are "absolute" and "inflexible," are not consistent with the standard of "maximum extent practicable" (MEP), and financially cannot be met.

Finding: The gist of BIA's contention concerns Discharge Prohibition A.2, concerning exceedance of water quality objectives for receiving waters: "Discharges from MS4s which cause or contribute to exceedances of receiving water quality objectives for surface water or groundwater are prohibited." BIA generally contends that this prohibition amounts to an inflexible "zero contribution" requirement.

BIA advances numerous arguments regarding the alleged inability of the dischargers to comply with this prohibition and the impropriety of requiring compliance with water quality standards in municipal storm water permits. These arguments mirror arguments made in earlier petitions that required compliance with water quality objectives by municipal storm water permittees. (See, e.g., Board Orders WQ 91-03, WQ 98-01, and WQ 99-05.) This Board has already considered and upheld the requirement that municipal storm water discharges must not cause or contribute to exceedances of water quality objectives in the receiving water. We adopted an iterative procedure for complying with this requirement, wherein municipalities must report instances where they cause or contribute to exceedances, and then must review and improve BMPs so as to protect the receiving

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[12] This Order does not address all of the issues raised by the petitioners. The Board finds that the issues that are not addressed are insubstantial and not appropriate for State Water Board review. (See *People v. Barry* (1987) 194 Cal.App.3d 158 [239 Cal.Rptr. 349]; Cal. Code Regs., tit. 23, § 2052.) We make no determination as to whether we will address the same or similar issues when raised in future petitions.

waters. The language in the permit in Receiving Water Limitation C.1 and 2 is consistent with the language required in Board Order WQ 99-05, our most recent direction on this issue.[13]

While the issue of the propriety of requiring compliance with water quality objectives has been addressed before in several orders, BIA does raise one new issue that was not addressed previously. In 1999, the Ninth Circuit Court of Appeals issued an opinion addressing whether municipal storm water permits must require "strict compliance" with water quality standards.[14] (*Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d 1159.) The court in *Browner* held that the Clean Water Act provisions regarding storm water permits do not require that municipal storm-sewer discharge permits ensure strict compliance with water quality standards, unlike other permits.[15] The court determined that: "Instead, [the provision for municipal storm water permits] *replaces* the requirements of [section 301] with the requirement that municipal storm-sewer dischargers 'reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator . . . determines appropriate for the control of such pollutants'." (191 F.3d at 1165.) The court further held that the Clean Water Act does grant the permitting agency discretion to determine what pollution controls are appropriate for municipal storm water discharges. (*Id.* at 1166.) Specifically, the court stated that U.S.

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[13] In addition to Discharge Prohibition A.2, quoted above, the permit includes Receiving Water Limitation C.1, with almost identical language: "Discharges from MS4s that cause or contribute to the violation of water quality standards (designated beneficial uses and water quality objectives developed to protect beneficial uses) are prohibited." Receiving Water Limitation C.2 sets forth the iterative process for compliance with C.1, as required by Board Order WQ 99-05.

[14] "Water quality objectives" generally refers to criteria adopted by the state, while "water quality standards" generally refers to criteria adopted or approved for the state by the U.S. EPA. Those terms are used interchangeably for purposes of this Order.

[15] Clean Water Act § 301(b)(1)(C) requires that most NPDES permits require strict compliance with quality standards.

EPA had the authority either to require "strict compliance" with water quality standards through the imposition of numeric effluent limitations, or to employ an iterative approach toward compliance with water quality standards, by requiring improved BMPs over time. (*Id.*) The court in *Browner* upheld the EPA permit language, which included an iterative, BMP-based approach comparable to the language endorsed by this Board in Order WQ 99-05.

In reviewing the language in this permit, and that in Board Order WQ 99-05, we point out that our language, similar to U.S. EPA's permit language discussed in the *Browner* case, does not require strict compliance with water quality standards. Our language requires that storm water management plans be designed to achieve compliance with water quality standards. Compliance is to be achieved over time, through an iterative approach requiring improved BMPs. As pointed out by the *Browner* court, there is nothing inconsistent between this approach and the determination that the Clean Water Act does not mandate strict compliance with water quality standards. Instead, the iterative approach is consistent with U.S. EPA's general approach to storm water regulation, which relies on BMPs instead of numeric effluent limitations.

It is true that the holding in *Browner* allows the issuance of municipal storm water permits that limit their provisions to BMPs that control pollutants to the maximum extent practicable (MEP), and which do not require compliance with water quality standards. For the reasons discussed below, we decline to adopt that approach. The evidence in the record before us is consistent with records in previous municipal permits we have considered, and with the data we have in our records, including data supporting our list prepared pursuant to Clean Water Act section 303(d). Urban runoff is causing and contributing to impacts on receiving waters throughout the state and impairing their

beneficial uses. In order to protect beneficial uses and to achieve compliance with water quality objectives in our streams, rivers, lakes, and the ocean, we must look to controls on urban runoff. It is not enough simply to apply the technology-based standards of controlling discharges of pollutants to the MEP; where urban runoff is causing or contributing to exceedances of water quality standards, it is appropriate to require improvements to BMPs that address those exceedances.

While we will continue to address water quality standards in municipal storm water permits, we also continue to believe that the iterative approach, which focuses on timely improvement of BMPs, is appropriate. We will generally not require "strict compliance" with water quality standards through numeric effluent limitations and we will continue to follow an iterative approach, which seeks compliance over time.[16] The iterative approach is protective of water quality, but at the same time considers the difficulties of achieving full compliance through BMPs that must be enforced throughout large and medium municipal storm sewer systems.[17]

We have reviewed the language in the permit, and compared it to the model language in Board Order WQ 99-05. The language in the Receiving Water Limitations is virtually identical to the language in Board Order WQ 99-05. It sets a limitation on discharges that cause or contribute to violation of water quality standards, and then it establishes an iterative approach to complying with the limitation. We are concerned, however, with the language in Discharge Prohibition A.2, which is

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[16] Exceptions to this general rule are appropriate where site-specific conditions warrant. For example, the Basin Plan for the Lake Tahoe basin, which protects an outstanding national resource water, includes numeric effluent limitations for storm water discharges.

[17] While BIA argues that the permit requires "zero contribution" of pollutants in runoff, and "in effect" contains numeric effluent limitations, this is simply not true. The permit is clearly BMP-based, and there are no numeric effluent limitations. BIA also claims that the permit will require the construction of treatment plants for storm water similar to the publicly-owned treatment works for sanitary sewage. There is no basis for this contention; there is no requirement in the permit to treat all storm water. The emphasis is on BMPs.

challenged by BIA. This discharge prohibition is similar to the Receiving Water Limitation, prohibiting discharges that cause or contribute to exceedance of water quality objectives. The difficulty with this language, however, is that it is not modified by the iterative process. To clarify that this prohibition also must be complied with through the iterative process, Receiving Water Limitation C.2 must state that it is also applicable to Discharge Prohibition A.2. The permit, in Discharge Prohibition A.5, also incorporates a list of Basin Plan prohibitions, one of which also prohibits discharges that are not in compliance with water quality objectives. (See, Attachment A, prohibition 5.) Language clarifying that the iterative approach applies to that prohibition is also necessary.[18]

BIA also objects to Discharge Prohibition A.3, which appears to require that treatment and control of discharges must always occur prior to entry into the MS4: "Discharges into and from MS4s containing pollutants which have not been reduced to the [MEP] are prohibited."[19] An NPDES permit is properly issued for "discharge of a pollutant" to waters of the United States.[20] (Clean Water Act § 402(a).) The Clean Water Act defines "discharge of a pollutant" as an "addition" of a pollutant to waters of the United States from a point source. (Clean Water Act section 502(12).) Section 402(p)(3)(B) authorizes the issuance of permits for discharges "from municipal storm sewers."

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[18] The iterative approach is not necessary for all Discharge Prohibitions. For example, a prohibition against pollution, contamination or nuisance should generally be complied with at all times. (See, Discharge Prohibition A.1.) Also, there may be discharge prohibitions for particularly sensitive water bodies, such as the prohibition in the Ocean Plan applicable to Areas of Special Biological Significance.

[19] Discharge Prohibition A.1 also refers to discharges into the MS4, but it only prohibits pollution, contamination, or nuisance that occurs "in waters of the state." Therefore, it is interpreted to apply only to discharges to receiving waters.

[20] Since NPDES permits are adopted as waste discharge requirements in California, they can more broadly protect "waters of the state," rather than being limited to "waters of the United States." In general, the inclusion of "waters of the state" allows the protection of groundwater, which is generally not considered to be "waters of the United States."

We find that the permit language is overly broad because it applies the MEP standard not only to discharges "from" MS4s, but also to discharges "into" MS4s. It is certainly true that in most instances it is more practical and effective to prevent and control pollution at its source. We also agree with the Regional Water Board's concern, stated in its response, that there may be instances where MS4s use "waters of the United States" as part of their sewer system, and that the Board is charged with protecting all such waters. Nonetheless, the specific language in this prohibition too broadly restricts all discharges "into" an MS4, and does not allow flexibility to use regional solutions, where they could be applied in a manner that fully protects receiving waters.[21] It is important to emphasize that dischargers into MS4s continue to be required to implement a full range of BMPs, including source control. In particular, dischargers subject to industrial and construction permits must comply with all conditions in those permits prior to discharging storm water into MS4s.

Contention: State law requires the adoption of wet weather water quality standards, and the permit improperly enforces water quality standards that were not specifically adopted for wet weather discharges.

Finding: This contention is clearly without merit. There is no provision in state or federal law that mandates adoption of separate water quality standards for wet weather conditions. In arguing that the permit violates state law, BIA states that because the permit applies the water quality

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[21] There are other provisions in the permit that refer to restrictions "into" the MS4. (See, e.g., Legal Authority D.1.) Those provisions are appropriate because they do not apply the MEP standard to the permittees, but instead require the permittees to demand appropriate controls for discharges into their system. For example, the federal regulations require that MS4s have a program "to reduce pollutants in storm water runoff from construction sites to the municipal storm sewer system . . . ." (40 C.F.R. § 122.26(d)(2)(iv)(D).)

objectives that were adopted in its Basin Plan, and those objectives were not specifically adopted for wet weather conditions only, the Regional Water Board violated Water Code section 13241. These allegations appear to challenge water quality objectives that were adopted years ago. Such a challenge is clearly inappropriate as both untimely, and because Basin Plan provisions cannot be challenged through the water quality petition process. (See Wat. Code § 13320.) Moreover, there is nothing in section 13241 that supports the claim that Regional Water Boards must adopt separate wet weather water quality objectives. Instead, the Regional Water Board's response indicates that the water quality objectives were based on all water conditions in the area. There is nothing in the record to support the claim that the Regional Water Board did not in fact consider wet weather conditions when it adopted its Basin Plan. Finally, Water Code section 13263 mandates the Regional Water Board to implement its Basin Plan when adopting waste discharge requirements. The Regional Water Board acted properly in doing so.

BIA points to certain federal policy documents that authorize states to promulgate water quality standards specific to wet-weather conditions.[22] Each Regional Water Board considers revisions to its Basin Plan in a triennial review. That would be the appropriate forum for BIA to make these comments.

Contention: BIA contends that the permit improperly classifies urban runoff as "waste" within the meaning of the Water Code.

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[22] These documents do not support the claim that U.S. EPA and the Clinton Administration indicated that the absence of such regulations "is a major problem that needs to be addressed," as claimed in BIA's Points and Authorities, at page 18.

Finding: BIA challenges Finding 2, which states that urban runoff is a waste, as defined in the Water Code, and that it is a "discharge of pollutants from a point source" under the federal Clean Water Act. BIA contends that the legislative history of section 13050(d) supports its position that "waste" should be interpreted to exclude urban runoff. The Final Report of the Study Panel to the California State Water Resources Control Board (March, 1969) is the definitive document describing the legislative intent of the Porter-Cologne Water Quality Control Act. In discussing the definition of "waste," this document discusses its broad application to "current drainage, flow, or seepage into waters of the state of harmful concentrations" of materials, including eroded earth and garbage.

As we stated in Board Order WQ 95-2, the requirement to adopt permits for urban runoff is undisputed, and Regional Water Boards are not required to obtain any information on the impacts of runoff prior to issuing a permit. (At page 3.) It is also undisputed that urban runoff contains "waste" within the meaning of Water Code section 13050(d), and that the federal regulations define "discharge of a pollutant" to include "additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man." (40 C.F.R. § 122.2.) But it is the waste or pollutants in the runoff that meet these definitions of "waste" and "pollutant," and not the runoff itself.[23] The finding does create some confusion, since there are discharge prohibitions that have been incorporated into the permit that broadly prohibit the discharge of "waste" in certain circumstances.

[23] The Regional Water Board is appropriately concerned not only with pollutants in runoff but also the volume of runoff, since the volume of runoff can affect the discharge of pollutants in the runoff. (See Board Order WQ 2000-11, at page 5.)

(See Attachment A to the permit.) The finding will therefore be amended to state that urban runoff contains waste and pollutants.

Contention: BIA contends that the Regional Water Board violated California Environmental Quality Act (CEQA).

Finding: As we have stated in several prior orders, the provisions of CEQA requiring adoption of environmental documents do not apply to NPDES permits.[24] BIA contends that the exemption from CEQA contained in section 13389 applies only to the extent that the specific provisions of the permit are required by the federal Clean Water Act. This contention is easily rejected without addressing whether federal law mandated all of the permit provisions. The plain language of section 13389 broadly exempts the Regional Water Board from the requirements of CEQA to prepare environmental documents when adopting "any waste discharge requirement" pursuant to Chapter 5.5 (§§ 13370 et seq., which applies to NPDES permits).[25] BIA cites the decision in *Committee for a Progressive Gilroy v. State Water Resources Control Board* (1987) 192 Cal.App.3d 847. That case upheld the State Water Board's view that section 13389 applies only to NPDES permits, and not to waste discharge requirements that are adopted pursuant only to state law. The case did not concern an NPDES permit, and does not support BIA's argument.

Contention: WSPA contends that the Regional Water Board did not follow this Board's precedent for retail gasoline outlets (RGOs) established in the LA SUSMP order.

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[24] Water Code section 13389; see, e.g., Board Order WQ 2000-11.

[25] The exemption does have an exception for permits for "new sources" as defined in the Clean Water Act, which is not applicable here.

Finding: In the LA SUSMP order, this Board concluded that construction of RGOs is already heavily regulated and that owners may be limited in their ability to construct infiltration facilities. We also noted that, in light of the small size of many RGOs and the proximity to underground tanks, it might not always be feasible or safe to employ treatment methodologies. We directed the Los Angeles Regional Water Board to mandate that RGOs employ the BMPs listed in a publication of the California Storm Water Quality Task Force. (*Best Management Practice Guide – Retail Gasoline Outlets* (March 1997).) We also concluded that RGOs should not be subject to the BMP design standards at this time. Instead, we recommended that the Regional Water Board undertake further consideration of a threshold relative to size of the RGO, number of fueling nozzles, or some other relevant factor. The LA SUSMP order did not preclude inclusion of RGOs in the SUSMP design standards, with proper justification, when the permit is reissued.

The permit adopted by the Regional Water Board did not comply with the directions we set forth in the LA SUSMP order for the regulation of RGOs. The permit contains no findings specific to the issues discussed in our prior order regarding RGOs, and includes no threshold for inclusion of RGOs in SUSMPs. Instead, the permit requires the dischargers to develop and implement SUSMPs within one year that include requirements for "Priority Development Project Categories," including "retail gasoline outlets." While other priority categories have thresholds for their inclusion in SUSMPs, the permit states: "Retail Gasoline Outlet is defined as any facility engaged in selling gasoline."[26]

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[26] Permit at F.1.b(2)(a)(x).

The Regional Water Board responded that it did follow the directions in the LA SUSMP order. First, it points to findings that vehicles and pollutants they generate impact receiving water quality. But the only finding that even mentions RGOs is finding 4, which simply lists RGOs among the other priority development project categories as land uses that generate more pollutants. The Regional Water Board staff also did state some justifications for the inclusion of RGOs in two documents. The Draft Fact Sheet explains that RGOs contribute pollutants to runoff, and opines that there are appropriate BMPs for RGOs. The staff also prepared another document after the public hearing, which was distributed to Board Members prior to their vote on the permit, and which includes similar justifications and references to studies.[27] The LA SUSMP order called for some type of threshold for inclusion of RGOs in SUSMPs. The permit does not do so. Also, justifications for permit provisions should be stated in the permit findings or the final fact sheet, and should be subject to public review and debate.[28] The discussion in the document submitted after the hearing did not meet these criteria. There was some justification in the "Draft Fact Sheet," but the fact sheet has not been finalized.[29] In light of our concerns over whether SUSMP sizing criteria should apply to RGOs, it was incumbent on the Regional Water Board to justify the inclusion of RGOs in the permit findings or in a final fact sheet, and to consider an appropriate threshold, addressing the concerns we stated. The Regional Water Board also responded that when the dischargers develop the SUSMPs, the dischargers

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[27] See "Comparison Between Tentative Order No. 2001-01 SUSMP Requirements and LARWQCB SUSMP Requirements (as Supported by SWRCB Order WQ 2000-11)."

[28] See 40 C.F.R. sections 124.6(e) and 124.8.

[29] U.S. EPA regulations require that there be a fact sheet accompanying the permit. (40 C.F.R. § 124.8.) The record contains only a draft fact sheet, which was never published or distributed in final form. The Regional Water Board should finalize the fact sheet, accounting for any revisions made in the final permit, and publish it on its web site as a final document.

might add specific BMPs and a threshold as directed in the LA SUSMP order. But the order specifically directed that any threshold, and the justification therefore, should be included in the permit. The Regional Water Board did not comply with these directions.

III. CONCLUSIONS

Based on the discussion above, the Board concludes that:

1. The Regional Water Board appropriately required compliance with water quality standards and included requirements to achieve reduction of pollutants to the maximum extent practicable. The permit must be clarified so that the reference to the iterative process for achieving compliance applies not only to the receiving water limitation, but also to the discharge prohibitions that require compliance with water quality standards. The permit should also be revised so that it requires that MEP be achieved for discharges "from" the municipal sewer system, and for discharges "to" waters of the United States, but not for discharges "into" the sewer system.

2. The Regional Water Board was not required to adopt wet-weather specific water quality objectives.

3. The Regional Water Board inappropriately defined urban runoff as "waste."

4. The Regional Water Board did not violate the California Environmental Quality Act.

5. The permit will be revised to delete retail gasoline outlets from the Priority Development Project Categories for Standard Urban Storm Water Mitigation Plans. The Regional Water Board may consider adding retail gasoline outlets, upon inclusion of appropriate findings and a threshold describing which outlets are included in the requirements.

IV. ORDER

IT IS HEREBY ORDERED that the Waste Discharge Requirements for Discharges of Urban Runoff from the Municipal Separate Storm Sewer Systems in San Diego County (Order No. 2001-01) are revised as follows:

1. Part A.3: The words "into and" are deleted.

2. Part C.2: Throughout the first paragraph, the words ", Part A.2, and Part A.5 as it applies to Prohibition 5 in Attachment A" shall be inserted following "Part C.1."

3. Finding 2: Revise the finding to read: **URBAN RUNOFF CONTAINS "WASTE" AND "POLLUTANTS"**: Urban runoff contains waste, as defined in the California Water Code, and pollutants, as defined in the federal Clean Water Act, and adversely affects the quality of the waters of the State.

4. Part F.1.b(2)(a): Delete section "x."

In all other respects the petitions are dismissed.

CERTIFICATION

The undersigned, Clerk to the Board, does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the State Water Resources Control Board held on November 15, 2001.

AYE: Arthur G. Baggett, Jr.
Peter S. Silva
Richard Katz

NO:

ABSENT:

ABSTAIN:

/ s/

Maureen Marché
Clerk to the Board

EXHIBIT "10"

STATE OF CALIFORNIA

STATE WATER RESOURCES CONTROL BOARD

ORDER WQ 2006-0012

In the Matter of the Petition of

BOEING COMPANY

For Review of Waste Discharge Requirements (WDR) Orders R4-2004-0111, R4-2006-0008, and R4-2006-0036 for the Santa Susana Field Laboratory Issued by the California Regional Water Quality Control Board, Los Angeles Region

SWRCB/OCC FILES A-1653 AND A-1737

BY THE BOARD:

The Boeing Company (Boeing) operates the Santa Susana Field Laboratory (SSFL) in Ventura County.[1] The Los Angeles Regional Water Quality Control Board (Los Angeles Water Board) has regulated wastewater discharges from SSFL to waters of the United States since at least 1992.[2] The regulated discharges include storm water runoff, discharges from groundwater remediation systems, industrial wastewater from ongoing operations such as engine test stands, and domestic wastewater from two sewage treatment plants.

On July 1, 2004, the Los Angeles Water Board re-issued a permit to Boeing for discharges from SSFL. (Waste Discharge Requirements Order No. R4-2004-0111 (2004 Permit).) On August 2, 2004, Boeing filed a petition with the State Water Resources Control

[1] Boeing owns SSFL with the National Aeronautical Space Agency (NASA). The United States Department of Energy (DOE) also owns several buildings at the site. NASA and DOE are not named in the permit reviewed herein, and their participation is not an issue before us.

[2] Waste Discharge Requirements Order No. 92-092, adopted December 7, 1992. The permit was reissued in 1998 (1998 Permit). Waste Discharge Requirements Order No. 98-051, adopted June 29, 1998. This is a national pollutant discharges elimination system (NPDES) permit, No. CA0001309.

Board (State Water Board) challenging the 2004 Permit.[3] (Our File No. A-1653.) Boeing requested that its petition be held in abeyance.[4]

On January 19, 2006, the Los Angeles Water Board modified the 2004 Permit, adding and revising the outfalls listed and the effluent limitations. (Waste Discharge Requirements Order No. R4-2006-0008; January 2006 Permit.) On February 21, 2006, Boeing filed a petition challenging the January 2006 Permit and the failure of the Los Angeles Water Board to adopt a Cease and Desist Order with a compliance schedule and interim effluent limitations. (Our File No. A-1737.) Boeing also asked the State Water Board to activate its 2004 petition, File No. A-1635. On March 9, 2006, the Los Angeles Water Board again revised Boeing's permit, this time adding additional effluent limitations. (Waste Discharge Requirements Order No. R4-2006-0036; March 2006 Permit.) On March 16, 2006, Boeing filed a petition challenging the March 2006 Permit.[5] Boeing also requested a stay of various effluent limitations. The State Water Board denied the stay request in Order WQ 2006-0007.[6]

Many of Boeing's contentions concern the propriety and legality of numeric effluent limitations in the Permit. In particular, Boeing emphasizes that its discharges are largely storm water, and it points to the issues this Board faces as to whether to include numeric effluent limitations in storm water permits. As we will explain, the issues addressed in this Order are relevant only to a unique industrial operation subject to an individual NPDES permit. Our conclusions here do not apply to the issue of numeric effluent limitations for general permits

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[3] Committee to Bridge the Gap (CBG) also filed a petition challenging the permit. (Our File No. A-1653(a).) The State Water Board dismissed CBG's petition on February 14, 2005.

[4] The State Water Board's regulations allow a petitioner to request its petition be held in abeyance. (California Code of Regulations (Cal. Code Regs.), tit. 23, § 2050, subd. (d).) When a petition challenging a permit is held in abeyance, the State Water Board does not act upon the petition until it is activated and the challenged permit remains in full force and effect. (*Ibid.*)

[5] The March 16 petition was not assigned a separate file number, and instead is considered to be an amendment to File No. A-1737. All of the petitions filed by Boeing have been consolidated for purposes of review. (Cal. Code Regs., tit. 23, § 2054.) The 2004 Permit, as modified, is referred to as "the Permit." Where necessary, the different versions are referred to as the 2004 Permit, the January 2006 Permit, and the March 2006 Permit.

[6] The State Water Board received the administrative record and responses to the petitions on May 15, 2006. Part of the record was a report Boeing submitted to the Los Angeles Water Board for its February 2006 meeting. CBG asks this Board to limit the use of that report. All portions of the record were before the Los Angeles Water Board in its actions and are appropriately part of our administrative record. On October 13, 2006, Boeing submitted a new report to the State Water Board and asks that it be considered a part of our administrative record. We decline to do so. That report was received long after the Los Angeles Water Board acted and only two weeks before the State Water Board issued its draft order in this matter. Moreover, Boeing refused to place its petitions in abeyance, which would have allowed time for the State Water Board to review the report and for interested persons to respond to the permit. (See, Cal. Code Regs., tit. 23, § 2050.6.) Boeing's request is denied.

regulating discharges of storm water from thousands of entities engaged in construction and industrial activities.

In this Order, the State Water Board upholds the Permit in most respects. We conclude that the Los Angeles Water Board acted properly in issuing the Permit and in including requirements more akin to a typical individual NPDES permit than the General Permit for Industrial Activities.[7] We also conclude that the Permit includes appropriate monitoring requirements and sites. Moreover, we conclude that at least until Boeing submits a report of waste discharge describing its changed discharge, the Permit must continue to regulate many of the discharges from SSFL as commingled wastewater, rather than as storm water discharges. We also conclude Outfall 001 is duplicative with Outfall 011 and that Outfall 002 is duplicative with Outfall 018 for enforcement purposes. Only two of these outfalls should be regulated with numeric effluent limitations as compliance points. The numeric effluent limitations contained in the Permit were properly calculated and were properly based on the "reasonable potential" for discharges from SSFL to cause or contribute to exceedances of water quality standards and it is appropriate and proper for the Permit to retain these numeric effluent limitations. Finally, we conclude that the Los Angeles Water Board erred in failing to issue a cease and desist order (CDO), including a compliance schedule with interim effluent limitations, following a catastrophic fire at SSFL in September 2005. We will remand the Permit to the Los Angeles Water Board to make revisions consistent with this Order. The compliance schedule shall apply retroactively to the adoption of the January 2006 Permit.[8]

I. BACKGROUND

Boeing's SSFL is located at the top of Woolsey Canyon Road in Simi Hills. The site includes approximately 1500 acres of developed land and 1200 acres of undeveloped land. Industrial activities have occurred at the site for more than 50 years. These activities have included research, development, assembly, disassembly, and testing of rocket engines, missile components, and chemical lasers. There have also been nuclear reactors at SSFL, and the administrative record shows evidence of accidents with these reactors. As of the time the Permit was issued, Boeing activities that contributed to discharges, include rocket engine

[7] General Permit for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities (WQO No. 97-03-DWQ).

[8] All contentions not discussed in this Order are not sufficiently substantial to warrant review. (See *People v. Barry* (1987) 194 Cal.App.3d 158; Cal. Code Regs., tit. 23, § 2052(a)(1).)

testing, fire suppression, pressure-testing of equipment to support rocket engine testing, domestic wastewater treatment, and contaminated groundwater treatment.

Boeing representatives have recently stated, including in testimony at the hearing on its stay request, that the only existing discharges from the site are storm water runoff. In particular, Boeing representatives state that it has stopped all rocket engine testing and will not resume testing, if at all, until it can remove all wastewater associated with testing from the site (presumably by trucking the wastewater offsite). In addition, they testified that the treatment plants (groundwater remediation and domestic sewage treatment) are no longer discharging at the site, but instead all wastewater is trucked away. There is nothing in the record to indicate that Boeing has submitted a report of waste discharge regarding these changes in its discharge or requested that the Permit be modified.[9]

Because of the historical activities at SSFL, the site is subject to remediation requirements pursuant to the Resource Conservation and Recovery Act of 1976 (RCRA).[10] The lead agency for the RCRA cleanup is the California Department of Toxic Substances Control (DTSC). DTSC regulates nine closed surface impoundments. The site had radioactive waste that the United States Department of Energy (DOE) is responsible for decontaminating and decommissioning. Boeing still uses radioisotopes for calibrating radiation detectors and counting equipment, but there is no surface water discharge associated with these activities. There is surface runoff from throughout the site, including areas subject to RCRA cleanup. The record shows that there are instances where runoff from SSFL has been contaminated with, or has the potential to be contaminated with, constituents associated with the historical activities at the site and the RCRA remediation. For example, the catchment area of Outfall 004 is comprised of a landscape with surface soil contaminated with mercury and other constituents from the former Sodium Reactor Experiment site. Until the contaminated soil is removed (a likely final remediation solution for this area), Boeing has covered the soil with an impermeable cover and, at the bottom of the catchment, implemented BMPs to treat the runoff. If the cover were compromised, discharges from the site could enter surface waters. There are also constituents that have been detected in runoff from the site that are associated with historic

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[9] Dischargers must submit a report of waste discharge for any material change or proposed change in the character, location, or volume of their discharge. (Wat. Code, § 13260, subdivision (c).) The discharges characterized in the Permit generally occur only when there is wet weather runoff from the site. Thus, it is within Boeing's knowledge and control whether it will ensure that process water is not commingled with storm water in the future.

[10] 42 United States Code Annotated (U.S.C.A.) §§ 6901 et seq.

activities. For example, perchlorate, a chemical associated with rocket propellant testing, has been detected at an outfall near the rocket propellant testing area.

SSFL is situated in the Simi Hills. Because of its location and topography, and the large size of the facility, there is runoff from the site to several watersheds. Most of the runoff flows to Bell Creek, which is tributary to the Los Angeles River. There is also runoff into various drainages of Arroyo Simi and to Runkel, Dayton, and Woolsey Canyons. The Permit establishes eighteen outfalls.[11] Outfalls 001 and 002 are at the southerly perimeter of the SSFL, and approximately sixty percent of the runoff from the facility discharges through these two outfalls, which lead to Bell Creek, and then to the Los Angeles River. Outfall 008 discharges to Happy Valley, and ultimately to Bell Creek and the Los Angeles River. Discharges through Outfalls 003, 004, 005, 006, 007, 009, and 010 flow to small watersheds to the northwest of SSFL. These are not tributary to the Los Angeles River. Outfalls 011, 012, 013, 014, 015, 016, 017, and 018 each are sited near areas of specific activities on SSFL, including the two domestic sewage treatment plants, the groundwater treatment plant, and the rocket engine test stand. Outfalls 012-017 each discharge to waters that flow through Outfalls 011 or 018, which in turn flow through Outfalls 001 and 002, respectively. There are several points that are important to our deliberations regarding these outfalls: (1) Outfalls 001-010 are each situated along the perimeter of SSFL, while Outfalls 011-018 are situated in the interior of the site and discharge through perimeter outfalls; (2) Outfalls 001, 002, and 011-018 are authorized to discharge commingled storm water, industrial process water (from groundwater treatment and rocket engine testing) and domestic wastewater (from the sewage treatment plants); and (3) Outfalls 003-010 are the only outfalls designated in the Permit as discharging only storm water runoff.

The Los Angeles Water Board initially adopted the Permit that Boeing now challenges in July 2004. It amended the Permit in January and March 2006, adding and revising effluent limitations each time. In January 2006, the Los Angeles Water Board considered but refused to adopt a CDO, which would have included a time schedule and interim effluent limitations. Boeing filed a petition challenging the July 2004 Permit, but did not seek active review of its challenge to the Permit until February 21, 2006, when Boeing also challenged the January modification.[12] Boeing also challenged the failure to adopt the CDO.

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[11] These are designated Outfalls 001 through 018.

[12] It later challenged the March modification also.

In addition to the Permit modifications, which generally made the Permit more stringent, there was also a significant physical event at SSFL that impacted permit compliance. Beginning on September 28, 2005, the Topanga Fire swept through the site and burned approximately seventy percent of the site. The fire destroyed numerous plants that had served as vegetative cover to control runoff. At the time, BMPs Boeing employed to minimize pollutants in runoff were largely vegetative cover, and the fire destroyed most of this cover. The fire also resulted in ash deposition throughout the site, the result of burned material from both the site and adjacent areas, which contained contaminants regulated by the Permit. Since the fire, Boeing has been engaged in stabilizing and restoring vegetative cover and also in building new structural BMPs at the site.

II. CONTENTIONS AND FINDINGS[13]

Contention: Boeing contends that most, if not all, of its discharge is storm water runoff and that it should be regulated in a similar manner as the State Water Board's General Permit for Industrial Activities.

Finding: The discharges from SSFL are unusual in many respects. SSFL is a very large industrial site in a remote area, with no other industrial sites nearby. It occupies a large area on hillsides, with runoff flowing into a number of different watersheds. There are vast areas of historical contamination and development, and also large areas of open space and native vegetation. Calculations show that SSFL has the potential, in a 24-hour 10-year storm, to discharge an estimated 272 million gallons of storm water runoff. It is the subject of ongoing RCRA cleanup and groundwater remediation. While greatly reduced from its peak activity, there are still ongoing industrial activities occurring. While it originally was situated in a remote location, there are now many residential developments nearby SSFL. The Permit allows Boeing to discharge not only storm water runoff from the site, but also industrial process water, wastewater from groundwater treatment facilities, and domestic wastewater from sewage treatment plants.

The conditions described above make SSFL a unique site, especially because of its size, the degree of historical contamination, and the site topography that results in large

[13] Boeing included various interrelated contentions in its 2004 Petition, its February 2006 Petition, and its March 2006 Petition. Each petition essentially restated and revised the grounds for the petition. Each petition also included a statement of points and authorities, which also stated the bases for the petition somewhat differently than the petition itself. The statement of contentions herein is an effort to summarize and articulate these various arguments, while not restating verbatim each of the contentions listed in the different documents.

amounts of runoff during storm events. The Permit regulates both storm water-only and commingled storm water, domestic, and industrial process water discharges. As will be described below, the legal requirements for the regulation of storm water-only discharges vary from those for the regulation of process water discharges. Wastewater that commingles storm water and process water is subject to the legal requirements for industrial process water. The Permit was based on Boeing's request, through its report of waste discharge, for authorization to discharge process water and storm water from several outfalls at SSFL. In its papers and testimony, Boeing states that it is no longer discharging process water from these facilities. If that is so, in order for its permit to be revised accordingly, it must file a report of waste discharge describing this change in its discharge.[14]

Eight of the eighteen outfalls at SSFL are storm water-only outfalls: Outfalls 003-010. These eight outfalls are all "perimeter" outfalls—flows through these outfalls leave SSFL through different watersheds. (The only other perimeter outfalls—Outfalls 001 and 002—receive all of the commingled flows and together discharge approximately sixty percent of the total flows from SSFL.) While these eight outfalls are designated as storm water-only, the record shows that they each have a significant potential to discharge water contaminated by the historical practices and remediation activities at SSFL. Each of these outfalls is associated with areas of the site with significant historical activities. Outfalls 003-007 receive runoff from past and existing radiological facilities: runoff to Outfall 003 is from the Radioactive Material Handling Facility, runoff to Outfall 004 is from the Sodium Reactor Experiment, runoff to Outfall 005 is from Sodium Burn Pit 1, runoff to Outfall 006 is from Sodium Burn Pit 2, and runoff to Outfall 007 is from Building 100. Outfall 008, which discharges to Happy Valley, is located near facilities that formerly used perchlorate, and that constituent has been found in the runoff. Outfall 009 receives WS-13 drainage and runoff to Outfall 010 is from Building 203, and these outfalls were added to the Permit based on monitoring in the areas.[15] There are numerous other operation areas at SSFL that do not have individual outfalls specifically assigned to them. Generally, the outfalls listed in the Permit are associated with operations over which the

[14] During the proceedings on the stay request, Boeing's attorney stated that the only process water currently discharged is well purge water, and that change in discharge would be raised to the Los Angeles Water Board when the Permit is modified or reissued. In any event, the Permit as adopted does regulate both process water and storm water, some of it commingled, and the evidence shows that Boeing requested such a permit.

[15] The specific activities and runoff potential are described in detail, *infra*.

Los Angeles Water Board, rather than DTSC, is the lead agency.[16] The outfalls along the perimeter of SSFL, however, do capture all of the runoff that is known to have the potential to contain contaminants associated with industrial activities.

Boeing argues that its site is comparable to other sites regulated by the General Permit for Industrial Activities. It contends that the Los Angeles Water Board was required to follow the assumptions contained in that permit, including the absence of numeric effluent limitations therein. We disagree with this premise.

SSFL is a unique site warranting thorough and detailed regulation. It is not at all the same as a typical facility subject to the General Permit for Industrial Activities. Moreover, it is not permitted as a storm water-only site, regardless of whether the vast majority of the runoff is storm water, rather than process water. The federal Clean Water Act requires that all discharges of wastewater containing pollutants from industrial sites must comply with the technology-based requirements of best practicable control technology currently available (BCT) and best available technology economically achievable (BAT) and with any more stringent limitations necessary to meet water quality standards. (33 U.S.C.A. § 1311(b).)[17] These same standards apply to discharges of storm water associated with industrial activities. (CWA § 402(p)(3)(A).)[18] While the same legal standards in section 301(b) apply to both industrial process water and industrial storm water, the decision whether to include numeric water effluent limitations varies depending whether the permit regulates process water (even if mixed with storm water) or storm water only[19]. The separate rules for storm water discharges apply only to discharges "composed *entirely* of storm water." (CWA § 402(p)(1) (emphasis added).) For this reason, the General Permit for Industrial Activities authorizes only storm water discharges. Only eight of the eighteen outfalls at SSFL (Outfalls 003-010) are composed entirely of storm water. The other ten outfalls, whether or not they may be composed of "mostly" or "almost entirely" of storm water, as Boeing contends, are subject to the same regulatory requirements as any other industrial process water. Thus, Boeing does not qualify for coverage under the General Permit.

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[16] The Fact Sheet to the Permit includes a thorough discussion of the location, operations, and constituents associated with each outfall.

[17] Clean Water Act (CWA) § 301(b). Hereafter, citations to the federal statute will refer only to the CWA citation.

[18] *Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d 1159.

[19] As discussed in detail below, process water permits must include numeric effluent limitations unless it is not "feasible" to include such limitations. Storm water-only permits are not required to include numeric effluent limitations, without the necessity of determining infeasibility.

The Permit must include appropriate requirements for both process water and storm water discharges. Boeing also contends that numeric effluent limitations are not appropriate for process water discharges from SSFL, pursuant to federal regulations.[20] We will discuss in detail the propriety of numeric effluent limitations for the various outfalls regulated in the Permit. In general, however, we reject Boeing's contention that the Los Angeles Water Board was required to regulate the various discharges from SSFL in a similar manner to the General Permit for Industrial Activities.

Contention: Boeing contends that the monitoring and compliance points are inappropriate.

Finding: The Permit lists eighteen outfalls. Each outfall has numerous numeric effluent limitations for constituents for which the Los Angeles Water Board determined that discharges had the reasonable potential to cause or contribute to exceedances of water quality standards in surface waters. Boeing points out that prior permits for SSFL had fewer points where monitoring was required and where effluent limitations applied. A brief history of the Los Angeles Water Board's permitting strategy is necessary in order to understand this contention.

Boeing challenges the 2004 Permit and modifications in January and March of 2006. The prior permit was adopted in 1998. (Waste Discharge Requirements Order No. 98-051; 1998 Permit.) The 1998 Permit regulated storm water runoff, industrial and domestic wastewater, and groundwater treatment discharges from SSFL. The 1998 Permit established as compliance points Outfalls 001 and 002, which are 6,000 feet south of the final retention ponds, and Outfalls 003-007 to the north.[21] The 1998 Permit also stated that the storm water discharges were "covered by" the General Industrial Storm Water Permit and that "its requirements are incorporated in [the 1998 Permit] by reference."[22] For Outfalls 001 and 002, the 1998 Permit listed numeric effluent limitations for 49 constituents. Outfalls 003-007 in the 1998 Permit have numeric effluent limitations for 25 constituents. Most effluent limitations were for daily maximum and not for monthly average.

The 2004 Permit added the three perimeter outfalls that were not listed in the 1998 Permit (Outfalls 008-010) and the eight interior outfalls (Outfalls 011-018). The 2004

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[20] 40 Code of Federal Regulations (C.F.R.) § 122.44(k)(3).

[21] Thus, the 1998 Permit did not list as separate outfalls three of the perimeter outfalls listed in the 2004 Permit (008-010) and the eight interior outfalls that lead to 001 and 002 (011-018).

[22] 1998 Permit, Finding 27.

Permit also discussed the reasonable potential for discharges through the various outfalls to cause or contribute to exceedance of criteria in the California Toxic Rule (CTR).[23] The 2004 Permit included numeric effluent limitations for 40 constituents for Outfalls 001 and 002, 19 numeric effluent limitations for Outfalls 003-007, 11 numeric effluent limitations for Outfalls 008-010, and 14 numeric effluent limitations for Outfalls 015-017. (There were no numeric effluent limitations assigned to Outfalls 011, 012, 013, 014, or 018.) A significant change from the 1998 Permit was that the 2004 Permit included maximum daily loads in addition to the maximum daily concentrations in the prior permit. In addition, some of the limitations were more stringent, reflecting the CTR criteria, and some constituents changed. Thus, the major changes from the 1988 Permit to the 2004 Permit were not the inclusion of numeric effluent limitations in the permit—these were already in the 1998 permit, including numeric effluent limitations for storm water-only discharges. The major changes were the addition of numeric effluent limitations for three perimeter outfalls and for three interior outfalls, tightening of some numeric effluent limitations to implement the CTR criteria, and the addition of maximum daily loading limitations.

In January of 2006, based on monitoring results in the interim, the Los Angeles Water Board modified the 2004 Permit, adding numeric effluent limitations for Outfalls 011 and 018[24] and for Outfalls 012, 013, and 014[25]. This permit modification occurred shortly after the Topanga Fire. Finally, in March of 2006, the Los Angeles Water Board again modified the 2004 Permit, this time revising numeric effluent limitations to reflect two Total Maximum Daily Loads (TMDLs) the Board had adopted.[26] The result was more stringent and new numeric effluent limitations for outfalls with discharges ultimately flowing to the Los Angeles River: Outfalls 001, 002, 011, and 018.[27]

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[23] 40 C.F.R. title 131.36. In the CTR, the United States Environmental Protection Agency (U.S. EPA) adopted water quality standards for priority pollutants in California. The State Water Board adopted the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Plan, or SIP) in order to implement the CTR in permits. The CTR and the SIP were each adopted in 2000.

[24] The numeric effluent limitations for Outfalls 001, 002, 011 and 018 are identical.

[25] There are 19 numeric effluent limitations listed for Outfalls 012, 013, and 014.

[26] The TMDLs were for metals and for nutrient loading in the Los Angeles River. TMDLs are required by § 303 of the CWA. NPDES permits must be consistent with the assumptions and requirements of TMDLs. (40 C.F.R. § 122.44(d)(1)(vii).)

[27] Some interior outfalls ultimately flowing to the Los Angeles River also have TMDL-based effluent limitations.

For each effluent limitation at each outfall, the 2004 Permit requires monitoring. Boeing challenges both the number of outfalls listed as compliance points and the breadth of the monitoring requirements. NPDES permits generally must require monitoring at each outfall for each constituent for which there are effluent limitations.[28] The federal regulations do not require analytical monitoring at facilities that discharge storm water associated with industrial activities,[29] but this relaxation of requirements is generally associated with the "nature of the permit conditions."[30] Thus, where a permit regulating storm water discharges associated with industrial activity does contain numeric effluent limitations, "sampling requirements will be appropriate,"[31] while permits that include BMPs in lieu of numeric effluent limitations, may require inspections and BMP evaluation rather than sampling.[32] Therefore, to the extent that outfalls are properly listed as compliance points and that numeric effluent limitations are appropriate, then the monitoring requirements are appropriate. We turn then to the propriety of listing eighteen outfalls as compliance points.

In reviewing the specific locations for sampling and compliance, it is true that the number of outfalls has grown, from the 1998 permit, which listed seven outfalls, to the 2004 Permit, which lists 18 outfalls. Moreover, when the 2004 Permit was adopted, it listed 13 outfalls as compliance points, and when it was modified in 2006, it listed 18 outfalls as compliance points. The actual activities at the SSFL did not vary greatly from 1998 until 2006, although the Los Angeles Water Board did obtain more detailed monitoring data over these years. The chief change in regulatory strategy that resulted in the addition of outfalls was the inclusion of "interior" outfalls as compliance points. There are seven outfalls that all drain to Outfalls 001 and 002.[33] In addition, the number of perimeter outfalls grew from seven to ten.[34] In reviewing the propriety of adding these outfalls as compliance points, we address the interior and perimeter outfalls separately.

We first consider the perimeter outfalls. The 2004 Permit added Outfalls 008, 009, and 010. Storm water runoff discharges from Outfalls 009 and 010 to Arroyo Simi to the

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[28] 40 C.F.R. § 122.44(i).

[29] 40 C.F.R. § 122.44(i)(2)(i)(4) and (5).

[30] Vol. 57 Federal Register 11394, 11402.

[31] *Ibid.*

[32] *Ibid.*

[33] Outfalls 011-018.

[34] Outfalls 008-010 were added.

north of SSFL. Storm water runoff at Outfall 008 discharges from Happy Valley to Dayton Canyon Creek, which ultimately flows to Bell Creek and then the Los Angeles River. Outfalls 001-007, which have all been compliance points with numeric effluent limitations since at least 1998, each discharge to different watersheds around the perimeter of the site.

The Fact Sheet to the 2004 Permit describes in detail each outfall, the locations of former and current industrial activities that are drained, and the constituents of concern. All of the perimeter outfalls are placed so that they would pick up pollutants associated with industrial activities. The industrial activities at the site, including the prior activities for which there are historic contaminants, are indeed potentially substantial contributors of pollutants to surface waters. Outfalls 001 and 002 receive the vast majority of the site's runoff, including treated wastewater, water from the groundwater treatment systems, excess reclaimed water, water from the engine test stands, and storm water. While the other perimeter outfalls have much less runoff, and do not receive process wastewater, they each drain areas that may contain pollutants from the numerous industrial activities conducted at the site. For example, Outfall 010 drains Building 203, which is subject to significant remediation measures under the direction of DTSC. The building was used for repair and calibration of instruments containing mercury. Currently, the building houses operations related to laser research, including polishing fibers, hand wipe solvent, and chemical cleaning, assembly and testing of components.[35] Should BMPs fail, these contaminants would pose significant risks to surface waters. We conclude that each of these perimeter outfalls is properly situated as a compliance point.[36] We also conclude that the 2004 Permit properly requires monitoring at each of these outfalls.

The interior outfalls[37] raise different issues concerning their propriety. Each of these outfalls is authorized to receive commingled process and storm water. Flows through Outfalls 012, 013, 016 and 017 discharge through Outfall 018, and thence through Outfall 002. Flows through Outfalls 014 and 015 discharge through Outfall 011, and thence through Outfall 001. Each of the six outfalls that flow to Outfalls 011 and 012[38] is located near areas of significant past and present industrial activity. While the effluent limitations for 012-017 vary depending on the contaminants present at the specific areas drained, the effluent limitations for 001, 002, 011, and 018 are identical, reflecting that each drains large areas of SSFL and that

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[35] All wastes are currently placed in containers and transported off-site for disposal.

[36] We will discuss separately, *infra*, the propriety of the numeric effluent limitations assigned to these outfalls.

[37] Outfalls 011-018.

011 and 018 drain to 001 and 002, respectively. The Fact Sheet for the January 2006 Permit states: "Discharges from Outfalls 011 and 018 receive no additional treatment or additional discharges prior to exiting Outfalls 001 and 002."[39]

In considering the decision by the Los Angeles Water Board to list Outfalls 011-018 as separate outfalls, each with numeric effluent limitations, we again consider the uniqueness of the SSFL site—its large size, its hilltop location, the significant chemicals used in the past, and to a lesser extent, in the present. We also note Boeing's argument that it no longer intends to discharge non-storm water flows, although it has not yet submitted a report of waste discharge for a permit that would prohibit all discharges of industrial process and domestic wastewater. Since the Permit currently regulates process water discharges at each interior outfall, it is appropriate to apply numeric effluent limitations at each of these outfalls. U.S. EPA regulations require this approach:

> All permit effluent limitations, standards, and prohibitions shall be established for each outfall or discharge point of the permitted facility, except as otherwise provided under §122.44(k) (BMPs where limitations are infeasible) . . . . (40 C.F.R. § 122.45(a).)[40]

It is possible that, even if Boeing continues to discharge commingled runoff, some of the numeric effluent limitations in the interior and the perimeter may, in fact, count the same violation twice in such a manner as to treat a single violation as multiple violations. In other words, if discharges are unchanged from an interior outfall to a perimeter outfall, and the same numeric effluent limitations are exceeded at each outfall, Boeing could be cited twice for the same violation. The ongoing monitoring results required by the Permit should disclose whether that is the case. Therefore, if Boeing does not submit a report of waste discharge limiting its discharges to storm water only, the Los Angeles Water Board must consider whether there is double counting for violations at more than one outfall and, if there is, avoid this. The Los Angeles Water Board should undertake this review when it reissues a permit.

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[38] Outfalls 012-017.

[39] Fact Sheet for January 2006 Permit, at p.35 accompanying Order No. R4-2006-0111. In its Response to Comments on the draft NPDES permit, the Los Angeles Water Board explains that the property between Outfalls 001 and 011 and between Outfalls 002 and 018 is undeveloped land where no industrial operations have occurred and that "staff will not oppose a decision to delete Outfalls 001 and 002 as compliance points or a decision to require monitoring only at these locations." (Fact Sheet, at p.34.)

[40] Thus, so long as numeric effluent limitations are appropriate, each outfall must be regulated as a compliance point. In the next Contention we discuss Boeing's contention that the Los Angeles Water Board erred in including numeric effluent limitations and that it should have instead used BMPs pursuant to 40 C.F.R. § 122.44(k).

Even before the Permit might be modified or reissued, we conclude that it was not appropriate for the 2006 Permit to establish compliance points at both Outfalls 001 and 011 and at both Outfalls 002 and 018. As is clear from the Fact Sheet and the Response to Comments, there is no evidence that there will be any change in pollutants discharged between Outfalls 011 and 001 or between Outfalls 018 and 002. According to the administrative record, there are no industrial operations or other potential contributors of pollutants between each of these points; the only rationale provided was that the decision was within the discretion of the Los Angeles Water Board. But in the exercise of discretion there must be rationale provided. Normally the State Water Board would not review the designation of specific outfall locations. In this case, because of the large number of effluent limitations and constituents regulated, adding Outfalls 011 and 018 will have the effect of doubling the number of any permit violations of effluent limitations at Outfalls 001 and 002 without any observable benefit to water quality. We conclude that the Permit should not have established effluent limitations for Outfalls 011 and 018.[41]

Contention: Boeing contends that the Permit inappropriately contains numeric effluent limitations for storm water-only discharges, that the numeric effluent limitations for commingled wastewater are improperly calculated, and that the Permit improperly determines that Boeing's discharges have the reasonable potential to cause or contribute to many of the water quality standards cited in the Permit.

Finding: Before addressing these contentions, we will point out that there are only eight outfalls that are currently authorized to discharge storm water only. While the other ten outfalls may discharge mostly or, as Boeing claims, "almost entirely" storm water, the fact that the Permit authorizes the discharge of industrial process and domestic wastewater from these outfalls raises different issues in evaluating the propriety of the process the Los Angeles Water Board followed in determining "reasonable potential" and in establishing numeric effluent limitations.

For the commingled discharges—Outfalls 001, 002, and 011-018—the Los Angeles Water Board was required to adopt numeric effluent limitations unless it was infeasible to establish such limitations.[42] In adopting numeric effluent limitations, it was required

[41] We will leave to the sound discretion of the Los Angeles Water Board whether to delete the effluent limitations from Outfalls 001 and 002 or from Outfalls 011 and 018. Pending that determination, this Order will stay the effect of the effluent limitations for Outfalls 011 and 018.

[42] For process water discharges, 40 C.F.R. § 122.44(k)(3) permits non-numeric effluent limitations, generally in the form of BMPs, where numeric effluent limitations are not feasible. (*Communities for a Better Environment v. State Water Board* (2003) 109 Cal.App.4th 1089, 1105.)

to comply with the SIP for priority pollutants listed in the CTR. The SIP sets forth the methodology for determining which constituents exhibit "reasonable potential" and for calculating the numeric effluent limitations. In prior orders,[43] we have discussed in detail the requirements of the SIP and the required methodology for determining reasonable potential and calculating effluent limitations. We have reviewed the methodology employed by the Los Angeles Water Board and its explanation of its determinations and find these efforts to be exceptional.

We will address Boeing's contention that, in light of section 122.44(k)(3) allowing the use of BMPs in lieu of numeric effluent limitations where it is infeasible to establish numeric effluent limitations, the Los Angeles Water Board acted improperly or inappropriately in establishing numeric effluent limitations.[44] Boeing contends that it has proven that it cannot comply with numeric effluent limitations "immediately" and it claims that Los Angeles Water Board staff members concede "that Boeing cannot immediately comply" with the requirements.[45]

There is little precedent concerning the meaning of the term "infeasible" in section 122.44(k)(3). In *Communities for a Better Environment, Supra*, the court upheld the Boards' conclusion "that a numeric WQBEL was not feasible (i.e., 'not appropriate') . . . ." We view the issue of determining whether a numeric effluent limitation is "feasible" as concerning the ability or propriety of establishing such a limit, rather than the ability of the discharger to comply. In *Communities*, the court addressed the feasibility of a numeric effluent where the limitation implemented a narrative water quality objective, there was a need for ongoing study of the constituent, and there was an upcoming TMDL for the particular constituent. (Numerous other constituents were subject to numeric effluent limitations for the mixed storm water and process water discharge in that case.[46]) We disagree with Boeing's reading of the provision, i.e. that "feasibility" refers to its ability to comply with the limitations. Discharges of process

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[43] See, e.g., *In the Matter of Yuba City*, State Water Board Order No. WQO 2004-0013 and *In the Matter of County Sanitation District No.2* Order No. WQO 2003-0009.

[44] It is, frankly, difficult to determine whether Boeing does, in fact, make this contention. Because of its emphasis on commingled discharges being mostly (or perhaps, all) storm water and its use of the term "infeasible" to refer to the time in which it can achieve compliance (discussed below), it is not entirely clear that Boeing is challenging the use of numeric effluent limitations to regulate the commingled wastewater. Nonetheless, because it seeks to "vacate any new numeric effluent limits added to the 2004 or 2006 Permits applicable to combined storm water and wastewater dischargers" (Petition, 2/21/06), we will address this contention.

[45] Memorandum of Points and Authorities, 3/16/06, at p.23.

[46] See, also, *In the Matter of National Steel and Shipbuilding Company*, Order WQ 98-07 (approving numeric effluent limitations for facility discharging storm water along with some process water).

wastewater from industrial sites (and storm water-only discharges associated with industrial activity) must comply with water quality standards.[47] Whether the permit limitations are written as BMPs or as numeric effluent limitations, the legal standard is the same. As we have stated before, programs of prohibitions, source control measures, and BMPs constitute effluent limitations and can be written to achieve compliance with water quality standards.[48]

In any event, Boeing does not clearly argue that, for its commingled wastewater discharges, it cannot achieve compliance with the numeric effluent limitations. Rather, it argues that it cannot achieve "immediate" compliance. Much of its argument refers to the impacts of the Topanga Fire and the need for time to come into compliance. This argument is relevant to the need for compliance schedules, rather than whether numeric effluent limitations should be employed. We are also cognizant that Boeing has been subject to numeric effluent limitations for discharges through 001 and 002, which drain all of the commingled wastewater outfalls, since at least 1998. Finally, the amount of toxic chemicals historically and currently used at the site, in addition to the site topography that results in large amounts of runoff, all lead to the conclusion that it is feasible, i.e. appropriate, to establish numeric effluent limitations for the commingled runoff from the site. We conclude that the Los Angeles Water Board did not act inappropriately or improperly in refusing to find that numeric effluent limitations were infeasible pursuant to 40 C.F.R. section 122.44(k)(3).

However, the Los Angeles Water Board must modify (or reissue) the permit so that either Outfalls 001 and 002 or Outfalls 011 and 018 are subject to numeric effluent limitations, but not all four outfalls.

There are eight outfalls that are currently permitted to discharge only storm water runoff.[49] These outfalls, except for Outfall 008, discharge to the northeast of SSFL, into different watersheds than the major Outfalls 001 and 002. Outfall 008 discharges through Happy Valley and eventually to the Los Angeles River, but not through Outfalls 001 or 002. All of these outfalls, except for Outfall 008, have been regulated with numeric effluent limitations at least since the 1998 Permit. Each outfall is positioned so as to receive runoff from specific areas associated with historic or existing areas with contamination from industrial activities.

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[47] CWA § 301(b).

[48] *In the Matter of Citizens for a Better Environment, et al.* Order WQ 91-3, at p.30-31.

[49] Outfalls 003-010.

Federal regulations do not require numeric effluent limitations for discharges of storm water.[50] The Water Boards can include numeric effluent limitations in individual storm water permits or can choose not to. The Water Boards are also not required to perform a reasonable potential analysis for each constituent.[51] We have long held that storm water permits issued in California need not always include numeric effluent limitations.[52] This is not to say that numeric effluent limitations cannot be included in storm water permits. In adding subsection (2) to section 122.44(k), the U.S. EPA explained that it was employing the Interim Permitting Policy for Water Quality-Based Effluent Limitations in Storm Water Permits (Interim Permitting Policy).[53] (Vol. 64 Fed. Reg. 68722, 86788-9.) The Interim Permitting Policy generally endorses narrative effluent limitations based on BMPs, but it also supports numeric effluent limitations where either there is adequate information or the facility has long been subject to numeric effluent limitations:

> "In cases where adequate information exists to develop more specific conditions or limitations to meet water quality standards, these conditions or limitations are to be incorporated into storm water permits, as necessary and appropriate. This interim permitting approach is not intended to affect those storm water permits that already include appropriately derived numeric water quality-based effluent limitations." (Vol. 61 Fed. Reg. 43761; repeated at Vol. 64 Fed. Reg. 68788.)

U.S. EPA explains that the Interim Permitting Policy does not explicitly apply to states and that states are encouraged to adopt similar policies. (*Ibid.*) As Boeing points out in its papers, the State Water Board is currently reviewing the issues concerning whether storm water permits should, as a general matter, contain numeric effluent limitations. To assist us in this task, we appointed a Blue Ribbon Panel and recently received their report and recommendations.[54] The Panel was asked to address the feasibility of numeric effluent

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[50] 40 C.F.R. § 122.44(k)(2).

[51] *Divers' Environmental Conservation Organization v State Water Resources Control Board* (2006) ___ Cal.Rptr.3d ___, 2006 WL 3423150.

[52] See, e.g., *In the Matter of Citizens for a Better Environment, et al.* Order WQ 91-3, at p.30-31. Note that prior to 1999, there was no separate exemption for storm water discharges apart from the general rule requiring numeric effluent limitations except where infeasible. Thus, our older decisions and general permits made determinations regarding feasibility. In 1999, § 122.44(k) was amended to add the subsection (2), which authorizes the permitting authority to include BMPs in lieu of numeric effluent limitations in storm water permits, without the necessity of making a determination of infeasibility. (Vol. 64 Fed. Reg. 68722, 68847.)

[53] U.S. EPA issued the Interim Permitting Policy was issued on August 1, 1996. (Vol. 61 Fed. Reg. 43761.)

[54] The report is available at http://www.waterboards.ca.gov/stormwtr/docs/numeric/swpanel_final_report.pdf.

limitations in general industrial permits, general construction permits, and area-wide municipal permits.[55] Thus, while the report will help the State Water Board and Regional Water Boards to design these new permits, the purpose of the Report was never specifically intended to address individual storm water permits.[56] The issues explored by the Panel are not directly applicable to this permit and our decision here does not reflect or presage our future actions and policies on the Panel report and the general question of numeric effluent limitations for storm water permits.

We conclude that the Boeing site is unique both from a physical standpoint–the immense area covered, the extensive past contamination, existing activities, and the amount of runoff from the steep terrain–and from a regulatory standpoint, since it has been subject to individual permits with numeric effluent limitations for storm water discharges for many years. The runoff from remediation areas has the potential to contain contaminants from the historic industrial activities. For example, the catchment area of Outfall 004 is comprised largely of a landscape whose surface soil is contaminated with mercury and other contaminants from the former Sodium Reactor Experiment site. Boeing is remediating this site and may ultimately remove the contaminated soil and dispose of it off-site. Until DTSC authorizes such a final solution, the contaminated soil is covered and Boeing uses BMPs at the bottom of the catchment to treat the runoff. It was appropriate and proper for the Los Angeles Water Board to continue to apply numeric effluent limitations at the storm water-only outfalls (including the addition of Outfall 008) in the 2004 Permit and in its modifications.

Boeing also contends that the Los Angeles Water Board was prohibited from applying the SIP when it decided to establish numeric effluent limitations for the storm water-only outfalls. We disagree. U.S. EPA adopted water quality criteria for priority pollutants in California in the CTR. (40 C.F.R. Part 131.36.) In 2000, the State Water Board adopted the SIP to implement the CTR. The SIP includes instructions on determining "reasonable potential" and in calculating numeric effluent limitations for priority pollutants. Thus, the SIP is legally applicable only to priority pollutants listed in the CTR.

The SIP is also not legally applicable to storm water discharges. In footnote 1 of the SIP, we stated: "This Policy does not apply to regulation of storm water discharges. The [State Water Board] has adopted precedential decisions addressing regulation of municipal

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[55] *Ibid.*

[56] It is, of course, possible that some of the policy decisions we will make regarding whether and how to use numeric effluent limitations in general and area-wide storm water permits could ultimately impact our review of individual permits, but we have not even acted upon the report's recommendations yet. Moreover, the permit at issue is an individual permit that is a reissuance of a permit that for almost 10 years has always included numeric effluent limitations for its storm water-only discharges.

storm water discharges in Orders WQ 91-03, 92-04, 96-13, 98-01, and 990-05. The [State Water Board] has also adopted two statewide general permits regulating the discharge of pollutants contained in storm water from industrial and construction activities." All of the references in this footnote refer to area-wide municipal permits and general permits that do not include numeric water quality-based numeric effluent limitations. Thus, by this footnote, we made clear our policy that such permits are not *required* to determine reasonable potential for each constituent or to include numeric effluent limitations.

While the SIP does not legally apply to storm water discharges, that is not to say that if, in an appropriate case, a storm water permit includes numeric effluent limitations, the SIP procedures cannot be employed to determine reasonable potential and to calculate effluent limitations. We have already addressed the use of the SIP for non-priority pollutants.[57] Where a regional water board makes determinations concerning "reasonable potential" and calculating numeric effluent limitations for constituents not subject to the CTR, the regional water board must articulate the bases for its determinations.[58] In *Yuba City*, we found that the regional board properly relied on both the SIP and U.S. EPA's Technical Support Document for Water Quality-Based Toxics Control (TSD) in establishing numeric effluent limitations for non-priority pollutants.[59] This is precisely what the Los Angeles Water Board did in this case. Just as the SIP can be used for non-priority pollutants, it can also be used for storm water discharges, so long as the methodology is explained and justified. We conclude that the Permit appropriately relied on the SIP, the TSD, and also the California Permit Writers Training Tool in developing the numeric effluent limitations. Because none of these documents are required by a formal Policy or a regulation to be used to determine "reasonable potential" and to calculate numeric effluent limitations for storm water discharge, the Los Angeles Water Board was required to explain fully its procedures.[60] We conclude that the Los Angeles Water Board met that burden.

Contention: Boeing claims that the Los Angeles Water Board erred in refusing to issue a cease and desist order with a four-year compliance schedule and interim effluent limitations in 2006.[61]

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[57] See, e.g. *In the Matter of Napa Sanitation District*, Order WQO 2001-16 and *In the Matter of Yuba City*, Order WQO 2004-0013.

[58] *Ibid.*

[59] EPA/505/2-90-001, March 1991.

[60] See requirements for calculating numeric effluent limitations in 40 C.F.R. title 122.44(d).

[61] Boeing refers to draft Order No. R4-2006-0YYY, which was prepared by staff from the Los Angeles Water Board.

Finding: The request for a CDO with a compliance schedule raises different issues than Boeing's claims that numeric effluent limitations were inappropriate because compliance with those limitations was "infeasible." As we discussed, above, the issue regarding feasibility for inclusion of numeric effluent limitations pursuant to 40 C.F.R. section 122.44(k)(3) concerns whether it is "appropriate", or feasible from a regulatory perspective, to establish numeric effluent limitations. In any event, the discharge is subject to the strict requirements of compliance with water quality standards. The propriety for an enforcement action that includes a time schedule to come into compliance with the permit's effluent limitations does turn on the specific discharger's ability to comply.[62]

The permitting history alone does not appear to justify the need for additional time to comply with the Permit. Permits for SSFL have included numeric effluent limitations since at least 1998. The vast majority of new and revised effluent limitations were added in July 2004. When Boeing filed a petition in August 2004, it asked that the petition remain in abeyance and it did not allege that it had been improperly denied a compliance schedule and interim limits. These issues were raised in its appeals of the 2006 Permit modifications. The 2006 modifications, however, were generally limited to adding effluent limitations to the interior Outfalls 012-014 and 015-017. Thus, on the face of the permitting actions alone, it is difficult to justify the need for a compliance schedule and interim limitations, especially Boeing's request that these revisions be retroactive to July 2004.

Boeing also points out, however, the devastating effects of the Topanga Fire as a basis for a compliance schedule and interim limits. The record includes ample evidence that the Topanga Fire, which destroyed vegetation through 70 percent of SSFL, was indeed a major incident that would significantly affect its ability to comply with the numeric effluent limitations in the Permit. The photographs and testimony in the record provide strong evidence that the BMP's in place prior to the September 2005 fire were substantially destroyed and that, in addition, ash from the fire likely contains additional contaminants regulated by the Permit. In light of the large size of SSFL and the fact that most of the volume of discharges are associated with storm water runoff,[63] the natural landscape has been used as the major component in the treatment system. Thus, vegetation is used to prevent and remove pollutants from moving off-

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[62] *City of Sacramento v. State Water Resources Control Board* (1992) 2 Cal.App.4th 960, 965.

[63] While commingling of process water and storm water result in the legal treatment of the wastewater as process water, in reviewing the *factual* issues, such as whether a fire resulted in the need for a compliance schedule, it is relevant that the wastewater discharges are largely composed of storm water runoff.

site in storm water flows. Commenters including CBG contend that prior to the Topanga Fire Boeing's BMPs were inadequate and that a compliance schedule would, in effect, reward Boeing for past inadequacies. We do not find that argument persuasive. First, regardless of how effective the BMPs and treatment used prior to the fire, all would still be burned and unusable after the fire. Second, while we agree that some of the BMPs most recently installed do surpass the prior BMPs,[64] we find that these new systems are state of the art and their absence prior to the fire does not necessarily indicate that the prior BMPs were inadequate. As to the list of violations throughout the several years prior to the fire, while we do not in any way condone permit violations, the number of individual permit violations at a site the size and complexity of SSFL does not necessarily mean that the BMPs were wholly inadequate.

The record shows that on January 19, 2006, the Los Angeles Water Board considered whether to issue a cease and desist order. A CDO is an enforcement order. Water Code section 13301 provides that when a regional board finds that a discharge of waste is taking place, or threatening to take place, in violation of a permit, "the board may issue an order to cease and desist" and may issue an order requiring immediate compliance, compliance in accordance with a time schedule, and appropriate remedial activities. The State Water Board's Water Quality Enforcement Policy explains the use of cease and desist orders:

> "Cease and Desist Orders (CDOs) are adopted pursuant to California Water Code sections 13301-13303. CDOs may be issued to dischargers violating or threatening to violate WDRs or prohibitions prescribed by the RWQCB or the SWRCB. CDOs are often issued to dischargers with chronic non-compliance problems. These problems are rarely amenable to a short-term solution. Often, compliance involves extensive capital improvements or operational changes. The CDO will usually contain a compliance schedule, including interim deadlines (if appropriate), interim effluent limits (if appropriate), and a final compliance date. CDOs may also include restrictions on additional service connections to community sewer systems and combined stormwater/sewer systems."[65]

In light of the circumstances of the Topanga Fire, the nature of the site, including its topography, the fact that most of the discharges consist of runoff, the difficulty of ensuring compliance at numerous outfalls that receive discharges from many sources, and the ensuing impact on Boeing's ability to comply with the permit terms, we conclude that the Los Angeles

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[64] For example, at the stay hearing, Boeing presented evidence of a carbon filtration system now employed at some outfalls.

[65] Water Quality Enforcement Policy, at p.20.

Water Board acted inappropriately in refusing to issue an enforcement order with a compliance schedule and interim effluent limitations based on the impacts from the Topanga Fire.

We have stated above that the Permit appropriately required strict compliance with water quality standards through numeric effluent limitations. Our findings in this section do not take away from that conclusion. They address, instead, whether the Los Angeles Water Board acted inappropriately and improperly by refusing to issue an enforcement action with a time schedule where the site was subject to a fire that destroyed its control structures. We find that it was not justifiable to demand immediate compliance by Boeing. In view of the impacts of the fire, a time schedule was warranted based on the specific situation that Boeing faced. We note that, as an enforcement action, a CDO does not condone permit violations. Rather, it constitutes a finding of violation or impending violation of an order and it carries with it the potential for higher fines should it be violated.[56] On the other hand, there is no justification to make the compliance schedule retroactive to July 2004, before the fire and before Boeing even pressed its claim that it needed a compliance schedule. We will remand this issue to the Los Angeles Water Board to issue a CDO. Any CDO should include a compliance schedule that is as short as possible. The order should be retroactive to January 19, 2006, when the matter was considered.

III. CONCLUSIONS

1. The Boeing Permit is an individual permit for commingled storm water and industrial process water and should not be regulated the same as sites subject to the General Permit for storm water discharges associated with Industrial Activities.
2. The monitoring requirements in the Permit are appropriate.
3. Outfalls 001-010, which are situated on the perimeter of the property, are properly situated as compliance points.
4. Outfalls 012-017, which are situated in the interior of the property, are properly situated as compliance points, at least while Boeing is authorized to discharge industrial process water, treated groundwater, and domestic wastewater. But in any event, it is inappropriate to count the same violation twice in such a manner as to treat a single violation as multiple violations.
5. Outfalls 001 and 011 and Outfalls 002 and 018 are duplicative because Outfalls 011 and 018 flow directly to Outfalls 001 and 002, respectively, without any change in flows or discharge in the interim and with only open space between them. The Permit should

[56] Wat. Code, § 13385, subdivision (e) requires consideration of prior history of violations in establishing administrative liability for permit violations.

include only one set of these outfalls as compliance points subject to numeric effluent limitations.

6. The Permit appropriately contains numeric effluent limitations and these were properly calculated based on determinations of "reasonable potential" to cause or contribute to exceedance of water quality standards.
7. The Los Angeles Water Board properly used the SIP and federal guidance materials to calculate numeric effluent limitations for storm water discharges by explaining and justifying its methodology.
8. The Los Angeles Water Board acted inappropriately in refusing to issue Boeing a CDO, with a compliance schedule and interim effluent limitations, when it modified the Permit in 2006, based on the effects of the Topanga Fire.
9. Nothing in this Order prevents enforcement of the Permits, except insofar as the Los Angeles Water Board adds a compliance schedule in a CDO, which compliance schedule shall not be effective until January 19, 2006. Also, the CDO does not operate to excuse violations of any Permit.

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IV. ORDER

The Permit is remanded to the Los Angeles Water Board to revise the provisions concerning Outfalls 001, 002, 011, and 018, consistent with this Order. The effluent limitations from Outfalls 011 and 018 are stayed, pending a determination by the Los Angeles Water Board deleting either Outfalls 011 and 018 or Outfalls 001 and 002 as compliance points. The Los Angeles Water Board is also instructed to issue a CDO with the shortest possible compliance schedule, which shall be based on the impacts from the Topanga Fire, with interim effluent limitations, and which shall be effective January 19, 2006. The Los Angeles Water Board is instructed to review the Permit to ensure that numeric effluent limitations for different outfalls do not count the same violation twice in such a manner as to treat a single violation as multiple violations. In all other respects, the petitions are DENIED.

CERTIFICATION

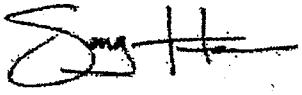
The undersigned, Clerk to the Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on December 13, 2006.

AYE: Tam M. Doduc
Arthur G. Baggett
Charles R. Hoppin
Gary Wolff, P.E., Ph.D.

NO: None

ABSENT: None

ABSTAIN: None



Song Her
Clerk to the Board

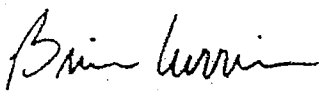
EXHIBIT "11"

Storm Water Panel Recommendations to the
California State Water Resources Control Board

The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities

June 19, 2006

Panelists:



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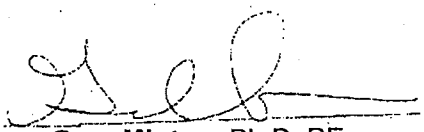
Sacramento, California



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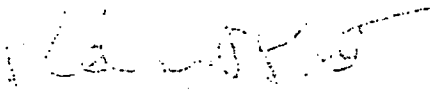

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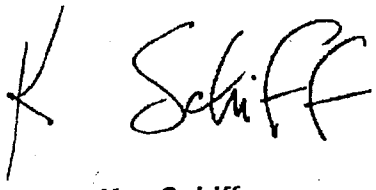

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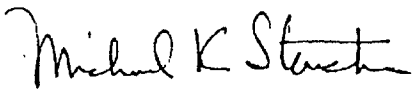

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"The opinions I express are my own and do not represent official US EPA policy."

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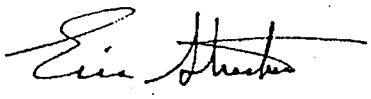

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Background

The NPDES storm water permit program came into being as a result of the 1987 amendments to the federal Clean Water Act and its implementing regulations. In California, the State Water Resources Control Board (State Water Board) and the nine Regional Water Quality Control Boards (Regional Water Boards) implement the NPDES storm water program.

The Clean Water Act amendments, Section 402(p) require that discharges of storm water from large and medium municipal separate storm sewer systems (MS4s) and discharges of storm water associated with industrial activities be in compliance with NPDES permits. MS4 permits require that the discharge of pollutants be reduced to the maximum extent practicable (MEP). Discharges associated with industrial activities, were required to meet the technology based standards of best available technology economically achievable (BAT) or best conventional pollutant control technology (BCT), and to meet water quality standards.

In 1990, USEPA promulgated regulations (40 CFR Part 122.26) for the NPDES storm water program. These regulations clarified what industrial activities were subject to storm water permit. Construction that resulted in a land disturbance of five or more acres was included as an industrial activity subject to NPDES storm water permit. The regulations also delineated what was to be included in permit applications and the programmatic elements that were to be in a permit and storm water management program for MS4s or storm water pollution prevention plan for industrial activities.

California's Permits

In 1990, MS4 permits were issued to Santa Clara County by the San Francisco Bay Regional Water Board and to Los Angeles County by the Los Angeles Regional Water Board. These permits were appealed to the State Water Board. The primary basis of the appeals was the lack of numeric limits in the permits. The entities that brought the appeals argued that the permits needed to include numeric limits, as the discharges of pollutants must not only be reduced to the MEP, but they must also meet water quality standards. The State Water Board, in hearing these appeals, determined that it was not feasible at the time to develop numeric limits for MS4 permits, and that water quality standards could and should be achieved through the implementation of best management practices (BMPs). Since this ruling, the Regional Water Boards have typically not included numeric limits in storm water permits.

The State Water Board has adopted NPDES General Permits for the Discharge of Storm Water Associated with Industrial Activities and for the Discharge of Storm Water Associated with Construction Activities. Both of these permits contain language stating that developing numeric limitations is infeasible.

Court Decisions

In addition to these actions on MS4 permits at the State level, there have been a number of rulings from the federal courts regarding the NPDES Storm Water program.

One of the most significant is from the federal court, 9th District Court of Appeals from 1999. In its published opinion on Defenders of Wildlife vs. Browner, the Court held that MS4 permits need not require strict compliance with water quality standards. Rather, compliance was to be based upon the MEP standard. However, the permitting authority (the State Water Board/Regional Water Boards for California) could at their option require compliance with standards. The State Water Board through the permit and appeals process has in fact required that the discharges from MS4s meet water quality standards, but has stated that compliance with numeric standards can be achieved through the implementation of BMPs in an iterative fashion.

The Browner decision also found that discharges of storm water associated with industrial activities must be in strict compliance with water quality standards.

In 2004 the State Water Board conducted a public hearing on a draft General Industrial Storm Water permit. This draft permit met with significant opposition from non-government or non-industrial organizations (NGOs) due to the absence of numeric limits. Staff revised the draft permit to include the benchmarks contained in the USEPA multi-sector general permit. This change resulted in strong opposition from the regulated community.

The concerns that have been raised by the NGOs and the regulated community are similar, though they do not necessarily agree on the best way to address them. Both believe that permitting has become overly complex, and that it is extremely difficult, if not impossible to objectively determine if a facility, operation or municipality is in compliance with its permit requirements. The NGOs argue that requiring storm water permittees to comply with numeric effluent limits will result in an easier way to measure compliance. The regulated community agrees, to a degree, but they argue that it is not simply a matter of selecting a number that is suitable for a POTW or industrial waste discharge. Due to the unique nature of storm events and storm water discharges, any numeric limit that is placed in a storm water permit must take into consideration the episodic nature of storm events and be truly representative of storm water discharges. In addition, the regulated community has argued that there are going to be pollutants in storm water discharges that did not originate in the MS4 (run on) or that they do not have the means to control, and therefore should be given special consideration.

In response to these arguments, State Water Board directed staff to convene a panel of storm water experts to examine the feasibility of developing numeric

limits for storm water permits. Specifically, this panel of experts was asked to consider the following:

> "Is it technically feasible to establish numeric effluent limitations, or some other quantifiable limit, for inclusion in storm water permits? How would such limitations or criteria be established, and what information and data would be required?"
>
> "The answers should address industrial general permits, construction general permits, and area-wide municipal permits. The answers should also address both technology-based limitations or criteria and water quality-based limitations or criteria. In evaluating establishment of any objective criteria, the panel should address all of the following:
>
> (1) The ability of the State Water Board to establish appropriate objective limitations or criteria; (2) how compliance determinations would be made; (3) the ability of dischargers and inspectors to monitor for compliance; and (4) the technical and financial ability of dischargers to comply with the limitations or criteria."

Staff invited 10 individuals from the academic and scientific community to participate on the panel. Of the 10, eight agreed to participate. These eight met in a public session on September 14, 2005 and heard presentations from the regulated and NGO communities. They also heard comments from the public at large. They met again on September 15, 2005 to discuss the public comments and to begin to formulate a response. It was also decided at this meeting that they would form sub-committees to address municipal (MS4), industrial and construction discharges separately. These sub-committees worked on drafts statements for each of these, circulating them over the course of a number of months.

The panel met again in private session on April 3 and 4, 2006. The purpose of these meetings was to address unresolved issues and to develop the final response to the State Water Board. It was also decided to combine the three working statements into one Statement of Findings. The following discussion is the panel's findings and is broken into three program element areas: municipal, construction, and industrial.

Panel's Findings on Feasibility of Numeric Effluent Limits Applicable to Municipal Activities

Municipal Observations

1. The current practice for permitting, designing, and maintaining municipal stormwater treatment facilities (called BMPs herein) on the urban landscape does not lend itself to reliable and efficient performance of the BMPs because:

   - Permitting agencies, including EPA, States, and local governments, have rarely developed BMP design requirements that consider the pollutants and/or parameters of concern, the form(s) that the pollutants or parameters are in, the hydrologic and hydraulic nature of how they pollutants and flow arrive, and then the resulting unit processes (treatment and/or flow management processes) that would be required to address these pollutants or parameters.
   - The permitting agencies generally are not accountable for the performance of the BMP, and thus give much leeway to the developer with respect to the type of BMPs to be constructed, and to the details of the design, although some states do have detailed design standards and have conducted performance tests to identify acceptable devices for their area.
   - The developer is not responsible in most all cases for the performance of the BMP, so the treatment facilities are designed to minimize the cost and/or area of the facility and/or ease of permitting, not maximize the pollutant removal efficiency and/or flow management of the BMP
   - Because BMPs are not held to any, or very few, long-term performance criteria, they are typically not maintained except for aesthetic purposes. Very few stormwater agencies are responsible for BMP maintenance on private property, and public facilities are maintained mostly in response to clogging and/or resultant drainage or aesthetic problems. Even for stormwater agency facilities, maintenance is often limited.

2. The principal reasons for the failure of BMP performance is improper BMP selection, design and/or lack of maintenance.

   - The California BMP Handbooks and other local requirements leave too much of the BMP selection and design to the discretion of the designer, and thus do not address many if not all of the receiving water quality issues

- BMPs need to be *designed to facilitate maintenance*; this is rarely done because it costs the developer money and the BMP designer is rarely responsible for the maintenance.

- Given the amount of debris in urban runoff, and the fact that the hydraulic capacity of many BMPs may be exceeded several to many times per year, BMPs require more maintenance than other types of stormwater control facilities. Since urban BMP maintenance is generally left to untrained homeowner associations and maintenance personnel for commercial properties, inadequate maintenance is a near certainty. Even stormwater agencies often do not have and/or apply the resources necessary to maintain agency owned BMPs.

3. Improvements in the design of municipal BMPs, including residential and commercial as well as municipally owned facilities are necessary to ensure better performance (i.e. sizing, geometry, inlet and outlet design, etc.) and to specifically target receiving water quality issues.

The Problem with Existing Effluent Limit Approaches

Effluent limit approaches usually focus only on conventional water quality constituents that may not be solely or at all responsible for the receiving water beneficial use impairments in urban receiving waters. The important stressors that affect many use impairments can include one or more of the following and may vary in importance from system to system:

- The effect of increased flows and/or volumes (i.e. hydromodification) that can lead to stream channel erosion/sedimentation with resulting habitat destruction

- Sediment contamination (such as enrichment of urban stream sediments with fine-grained heavily polluted particulates; large organic debris masses causing low sediment DO; settled bacteria causing large bacteria gradients with sediment depth etc.)

- Impaired aesthetic value (caused by gross floatables, noxious sediments, etc.)

- Unsafe conditions (caused by dangerous debris, highly fluctuating stream flows and stages, etc.)

- Dissolved and suspended pollutants that are bioavailable in the water column and/or result in downstream sediment contamination

- Elevated temperatures from urban heating effects on runoff and on open conveyances and permanent pool BMPs

It is very difficult to determine specific causative agents or the level of control needed, for a specific beneficial use impairment in a receiving water body. The *Stormwater Effects Handbook: A Tool Box for Watershed Managers, Scientists, and Engineers* (Burton, G.A. Jr., and R. Pitt, ISBN 0-87371-924-7. CRC Press, Inc., Boca Raton, FL. 2002. 911 pages) was written to be used as a guide for stormwater managers to identify their local receiving water problems and to assist in identifying the causative factors. The methods described would need to be applied to a specific area or region to obtain an understanding of local conditions and problems. Although expensive, comprehensive investigations such as these should be considered an investment to help minimize wasteful expenditures due to the application of inappropriate control practices in a watershed.

Monitoring for enforcement of numeric effluent limits would also be challenging. While spot checks could be made at some of the many outfalls in an area, there is wide variation in stormwater quality from place to place, facility to facility, and storm to storm. Coefficients of variation approaching 1 or higher are not uncommon and there are few factors that can be used to significantly reduce this variation. Analysis of the National Stormwater Quality Database indicates that geographical location and land use are the most important factors affecting stormwater quality for most constituents. Some are also affected by the antecedent dry period before the rain and more highly developed watersheds (containing large fractions of impervious areas) often show elevated "first-flush" concentrations in the first portion of the storms for some, but not all pollutants. Since the storm-to-storm variation at any outfall can be high, it may be unreasonable to expect all events to be below a numeric value. In a similar circumstance, there are a number of storms each year that are sufficiently large in volume and/or intensity, to exceed the design capacity volume or flow rates of most BMPs. Assessing compliance during these larger events represents yet another challenge to regulators and the regulated community.

Technical Issues

Even for conventional pollutants, there presently is no protocol that enables an engineer to design with certainty a BMP that will produce a desired outflow concentration for a constituent of concern. A possible exception is removal of Total Suspended Solids in extended detention basins, and some types of media filters. The typical approach for evaluating BMP pollutant removal efficiency has been *percent removal*; but observed removal efficiencies vary greatly from facility to facility and it has been demonstrated that percent removal varies directly with the inflow concentration.

Few, if any, BMPs are designed using the first principles laws of physics, chemistry and/or biology for pollutant removal and/or flow-duration control. It will

take a substantial research effort, including data gathering on well-designed BMPs, to develop design criteria for the removal of pollutants with confidence intervals that enable us to make reliable estimates of the median and variance of the effluent concentrations to be expected from the various types of BMPs. Until this is done, it will be very difficult to assign legally enforceable numerical effluent limitations to any particular BMP.

Drawing upon the body of knowledge that currently exists regarding pollutant removal efficiency, it is possible to estimate mean effluent concentrations and variances for a number of constituents for different types of BMPs, albeit not in a legally enforceable sense. Effluent concentration distributions for a number of BMPs are available in the International BMP Database (www.bmpdatabase.org) from more then 250 studies throughout the US. The following outlines key issues that have been identified regarding the technical feasibility of setting objective criteria for both existing areas and new or redeveloping areas:

- Effluent concentration estimates could be made for a given constituent and a particular BMP from a larger number of BMPs than available in the BMP Database using literature values of percent removal and local or national data on stormwater runoff EMC data. However, the results from this work would be significantly less reliable then the BMP Database data as it could be biased if the influent concentrations for the studied BMP types did not match general urban runoff.
- Designing the facility more rigorously with respect to the physical, chemical and biological processes (e.g. unit processes) that are active in the BMP would give confidence that the BMP would perform at least as well, if not better than the average performance determined from the literature. A WEF/ASCE task force is currently updating their Urban Runoff Quality Management Manual of Practice; design guidance of BMPS will make better use of the physical, chemical, and biologic processes taking place in the BMP before, during and after a storm event. This manual will build upon recent research efforts employing a unit process based approach for BMP design and selection. These research efforts were supported by the Water Environment Research Foundation (WERF) and the National Cooperative Highway Research Program (NCHRP).
- A BMP *designed* and *constructed* according to a set of criteria described above, could be ***presumed*** to deliver an effluent with a mean constituent concentration and variance similar to the performance numbers developed from the literature ***if it is properly maintained***. Enforcement would comprise periodic inspection of the facility using a checklist of items to be inspected. While not an effluent limit, this seems practical and quantifiable.

- Most all existing development rely on non-structural control measures, making it difficult, if not impossible to set numeric effluent limits for these areas because little is known about the quantity and quality performance of non-structural controls. However, certain development characteristics in some existing development areas that minimize the amounts of impervious areas in a drainage area have been shown to be quite effective in reducing adverse hydromodifications in the receiving waters, and should be encouraged.

Municipal Recommendations

It is not feasible at this time to set enforceable numeric effluent criteria for municipal BMPs and in particular urban discharges. However, it is possible to select and design them much more rigorously with respect to the physical, chemical and/or biological processes that take place within them, providing more confidence that the estimated mean concentrations of constituents in the effluents will be close to the design target. Moreover, with this more rigorous design and an enforceable maintenance program, it can be presumed that these facilities will continue to deliver effluent qualities that are reasonably close to the design effluent concentrations over the life of the facility. And if proper maintenance is performed (enforced), the facilities can be expected to perform throughout their design life at the same or better efficiency as when newly constructed. Depending on the pollutants and parameters of concern and BMP choices, it is very likely that treatment trains of structural BMPs will be required in many cases.

For catchments not treated by a structural or treatment BMP, setting a numeric effluent limit is basically not possible. However, the approach of setting an "upset" value, which is clearly above the normal observed variability, may be an interim approach that would allow "bad actor" catchments to receive additional attention. For the purposes of this document, we are calling this "upset" value an ***Action Level*** because the water quality discharged from such locations are enough of a concern that most all could agree that some action should be taken. Action Levels could be developed using at least three different approaches. These approaches include: 1) consensus based approach; 2) ranked percentile distributions; 3) statistically-based population parameters.

The consensus-based approach would be to agree upon effluent concentrations that all parties feel are not acceptable. For example, most parties would likely agree that an average concentration of dissolved copper above 100 ug/l from an urban catchment would not be acceptable. This would be an Action Level value that would trigger an appropriate management response. This approach may not directly address the issue of establishing numeric effluent criteria and achieving desired effluent quality, but the consensus-based approach would ensure that the "bad actor" watersheds received needed attention.

The ranked percentile approach (also a statistical approach) relies on the average cumulative distribution of water quality data for each constituent developed from many water quality samples taken for many events at many locations. The Action Level would then be defined as those concentrations that consistently exceed some percentage of all water quality events (i.e. the 90th percentile). In this case, action would be required at those locations that were consistently in the outer limit (i.e. uppermost 10th percentile) of the distribution of observed effluent qualities from urban runoff.

The statistically based population approach would once again rely on the average distribution of measured water quality values developed from many water quality samples taken for many events at many locations. In this case, however, the Action Level would be defined by the central tendency and variance estimates from the population of data. For example, the Action Level could be set as two standard deviations above the mean, i.e. if measured concentrations are consistently higher than two standard deviations above the mean, an Action situation would be triggered. Other population based estimators of central tendency could be used (i.e. geomean, median, etc.) or estimates of variance (i.e. prediction intervals, etc.). Regardless of which population-based estimators are used (or percentile from above), the idea would be to identify the [statistically-derived] point at which managers feel concentrations are significantly beyond the norm.

The ranked percentile and population-based estimators are highly dependent upon the data sets used to calculate them. There are a number of options that were considered by the Panel, but ultimately they were broken into two distinct categories. The first category was for new development/redevelopment and the second was for built out urban environments. For new development/redevelopment, the panel recommends using the data set associated with the international BMP database (www.bmpdatabase.org). This data set represents the variety of water quality from the most up to date, best conducted and reported BMP studies. The database effort does not limit itself to BMPs types or designs; it focuses on technically sound monitoring studies and reporting information. Therefore there could be some screening of studies to those thought to be well designed BMPs to then develop effluent quality distributions and statistics on performance. Certainly, there is no expectation that urban stormwater managers could improve water quality beyond what would be reported in this dataset.

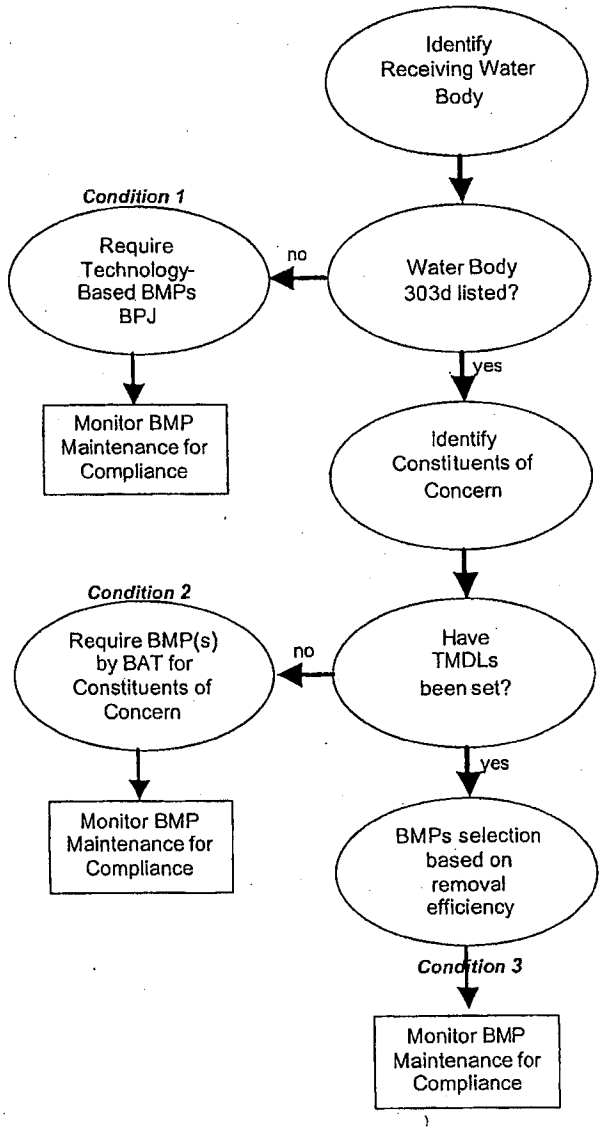
In built-out urbanized environments, there are greater opportunities to examine various data sets for setting Action Levels. For the Panel, these opportunities were a function of spatial scale. The first opportunity would be at the local scale. Some urban stormwater monitoring programs have been in existence for 10 years or longer. Examples include the Los Angeles County Department of Public Works, City of Sacramento, Orange County, San Diego County, amongst others. Using permit specific data sets may make sense if issues of climatic variability or

localized geomorphology are important. The next scale would be to combine these California municipal permit monitoring data sets, especially if lack of data for specific constituents of concern in any one location or region is an important issue. The largest scale would be the National Stormwater Quality Database (NSQD) from municipal monitoring programs across the nation (http://unix.eng.ua.edu/~rpitt/Research/ms4/Paper/Mainms4paper.html). This data set includes monitoring data from urban areas such as residential, commercial, industrial, freeway, institutional, and mixed use which is especially useful if small sample size limits the use of local data. One advantage of using smaller (and local), rather than larger, spatial scales is the ability to update data sets for revising Action Levels. The NSQD may not be updated for quite some time, but local data sets can be updated periodically (annual amendments, 10-year rolling averages, every permit cycle, etc). Ultimately, Action Levels would be expected to become lower as outliers are removed from data sets and as improved water quality data are collected through targeted management actions. It may be appropriate to eliminate older data sets as well over time.

One element to consider when comparing monitoring data to Action Levels is the concept of a design volume for water quality (also known as the Water Quality Capture Volume – WQCV, WEF #23 and ASCE publication #87, 1998) or a design flow rate. The WERF and NCHRP efforts mentioned above include recommendations regarding design sizing using continuous simulation techniques for both volume-based and rate-based BMPs. The Panel acknowledged that several to more times each year, the runoff volume or flow rate from a storm will exceed the design volume or rate capacity of the BMP. Stormwater agencies should not be held accountable for pollutant removal from storms beyond the size for which a BMP is designed.

A Technically Sound and Pragmatically Enforceable BMP Design and the Permit Process

The diagram below provides guidance for determining what BMPs are required in a newly developing watershed. Under ***Condition 1*** where the receiving water quality is not impaired, determination of the appropriate BMP would be by Best Professional Judgment (BPJ). Any of the "state approved" BMPs could be used. The permittee would be required to design the treatment facilities in accordance with the California BMP Handbook, ***which should be revised as a criteria manual***, rather than a guidance manual *and include more physiobiochemically based design criteria designed to address an agreed upon set of "Pollutants and Parameters of Concern" based upon knowledge of the pollutants and parameters that generally are of concern in urban runoff, with perhaps some differences on receiving water type.*



A detailed maintenance plan and schedule would be required that includes:

1. Actions to be taken and when,
2. Designation of the party legally accountable for the facility maintenance, and
3. A whole-life cost estimate for the facility that include maintenance.

Compliance with the design criteria and the maintenance plan and schedule would constitute achievement of the design effluent criteria. In the event of failure by the responsible party to perform the required maintenance and/or to perform it to the required level of quality, the whole-life cost schedule could be used to determine the consideration that the defaulting responsible party would pay to the new responsible party that takes over the maintenance.

Under ***Condition 2*** where water quality impairment exists but a TMDL has not yet been performed, BAT would be required, which means applying the BMPs that can practicably (to be defined) be employed to produce the lowest effluent concentrations (e.g. the lower grouping of BMP effluent quality) of the constituent(s) of concern. Several types of BMPs may fulfill the BAT standard if these BMPs have performance that is not statistically or practically differentiable. This case will allow flexibility in choosing among that sets of BMPs that demonstrate superior performance. As in the case of C*ondition 1,* compliance with the maintenance plan and schedule would constitute compliance with the design effluent criteria.

Condition 3, which occurs when a TMDL has been specified for the BMP or for the tributary watershed, may (or may not be) actually be less stringent that *Condition 2* if the TMDL allows for a higher effluent concentration of the constituents of concern than that discharged by a BAT facility. The same requirements would apply for the design criteria, and the maintenance plan and schedule would constitute the guarantee of design effluent concentrations from the BMP.

Strategies for Stormwater Management to Protect Urban Water Environments

Stormwater effluent limits can become very complex if all the issues are to be directly addressed. If complex, they are not likely to be workable. However, too much simplification can also lead to ineffective programs. Therefore, a reasonable first step is needed, based on local data. Compliance monitoring (e.g. BMP inspections) is also needed to ensure that the goals are likely to be met. Most likely goals will have to be revised over time. The overall strategy should contain these objectives:

- Effectiveness
- Affordability
- Enforceability, and
- Flexibility

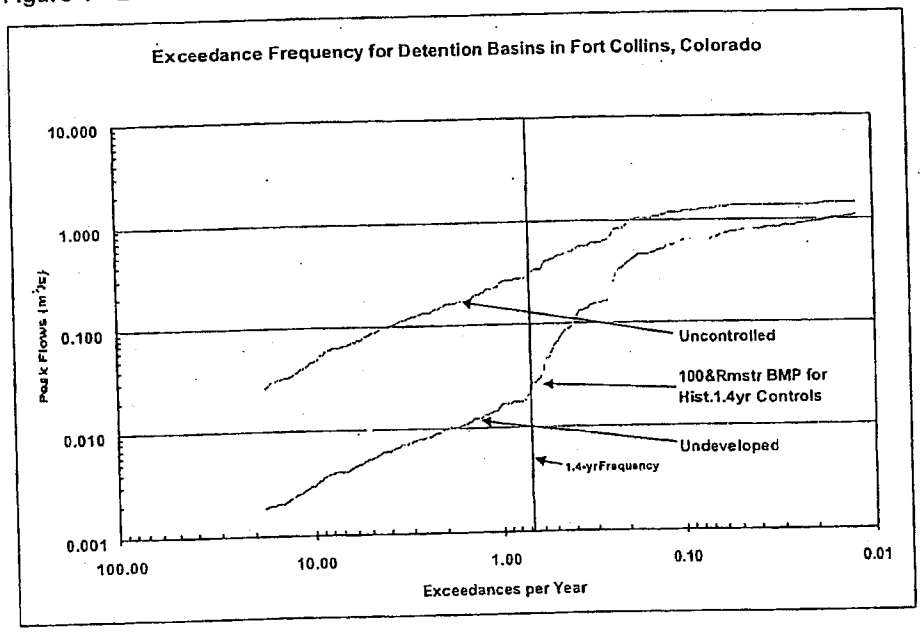
Table 1 - Effects of Urbanization on Hydrologic Regime in Colorado and Georgia

Location	Annual Precipitation	Mean Storm Depth*	Runoff Events per Year		Annual Runoff (mm)	
	Millimeters per Year	Millimeters	Undeveloped	Developed	Undeveloped	Developed
Fort Collins, CO	335	11	27	47	12	124
Atlanta, GA	1262	18	48	78	36	500

* Values obtained from Fig. 5.3 ASCE MOP (1998)

Runoff volume and peak flows have been recognized as two of the most important stormwater factors needing control. **Table 1** (Roesner and Nehrke) shows that urbanization dramatically changes the hydrologic regime of urban waterways. In both Atlanta (a higher rainfall area) and Fort Collins (a semiarid area), the number of runoff events per year on developed land increases by a factor of 2 times the number of runoff events that occur in the undeveloped state; and the runoff volume increases by a factor of ten! The peak flows also increase dramatically as shown in **Figure 1** below, but as also seen on the figure, the peak flow frequency curve can be adjusted back to its predevelopment character by the proper application of runoff controls. But while these controls restore the peak flow frequency to its natural regime, the duration of flows at the low end (but still channel "working") of the flow frequency curve is greatly increased, which raises potential for channel scour in stream channels with erosive soils.

Figure 1 - Exceedance Frequencies for Detention Basins in Fort Collins, Colorado



Since many of the stormwater pollutants are strongly associated with particulates, stormwater particulate control is also often a component of stormwater control programs. Therefore, an effective stormwater control strategy that could be encouraged is a combination of several practices, listed below in the order of increasing events:

- On-site stormwater reuse, evapotranspiration and infiltration for the smallest storms and up to specific targeted events, depending on site limitations (soil characteristics and groundwater contamination potential) (usually by conservation design emphasizing infiltration, disconnecting paved areas, etc.)
- Treatment of excess runoff that cannot be infiltrated, again, up to a specific targeted runoff volume (usually by sedimentation or filtration) For pollutants of concern, it should be demonstrated that the BMP(s) need to include the physical, biological, and/or chemical treatment processes that address the typical pollutants of concern and/or specific pollutants in the case of 303D listed water bodies or those with established TMDLs.
- Control of energy discharges for the channel forming events (such as through storage-release, focusing on flow-duration analyses and peak flow frequency analyses). To be most effective, this should to be completed under a watershed management plan and not site-by-site.
- Provide safe drainage for damaging events (conventional drainage, plus secondary drainage systems)
- In watersheds that are already experiencing damaging flow impacts to streams, it could be in many circumstances much more cost-effective (and effective period) to develop through a watershed plan a natural stream stabilization approach that could address both the existing development and the remaining smaller infill or otherwise smaller new development. In these cases, requiring the remaining new development to implement flow-duration control would not solve the issue in a measurable way and resources would be better spent restoring the functions of the creek with instream enhancements.

Panel's Findings on Feasibility of Numeric Effluent Limits Applicable to Construction Activities

Construction Observations

Regarding the question of the technical feasibility of Numeric Limits for stormwater discharges from construction activities, the Panel bases its recommendations on the following observations.

1. Limited field studies indicate that traditional erosion and sediment controls are highly variable in performance, resulting in highly variable turbidity levels in the site discharge.
2. Site-to-site variability in runoff turbidity from undeveloped sites can also be quite large in many areas of California, particularly in more arid regions with less natural vegetative cover and steep slopes.
3. Active treatment technologies involving the use of polymers with relatively large storage systems now exist that can provide much more consistent and very low discharge turbidity. However, these technologies have as yet only been applied to larger construction sites, generally five acres or greater. Furthermore, toxicity has been observed at some locations, although at the vast majority of sites, toxicity has not occurred. There is also the potential for an accidental large release of such chemicals with their use
4. To date most of the construction permits have focused on TSS and turbidity, but have not addressed other, potentially significant pollutants such as phosphorus and an assortment of chemicals used at construction sites.
5. Currently, there is no required training or certification program for contractors, preparers of soil erosion and sediment control Stormwater Pollution Prevention Plans, or field inspectors.
6. The quality of stormwater discharges from construction sites that effectively employ BMPs likely varies due to site conditions such as climate, soil, and topography.
7. The States of Oregon and Washington have recently adopted similar concepts to the Action Levels described earlier.

Construction Recommendations

It is the consensus of the Panel that active treatment technologies make Numeric Limits technically feasible for pollutants commonly associated with stormwater discharges from construction sites (e.g. TSS and turbidity) for larger construction sites. Technical practicalities and cost-effectiveness may make these technologies less feasible for smaller sites, including small drainages within a larger site, as these technologies have seen limited use at small construction sites. If chemical addition is not permitted, then Numeric Limits are not likely feasible. Whether the use of Numeric Limits is prudent, practical or necessary to more effectively achieve nonpoint pollution control is a separate question that

needs to be answered, but is outside the scope of this Panel. However, Action Levels are likely to be more commonly feasible. For small sites or smaller drainages within larger sites, or where chemicals cannot be used, the Panel recommends that Action Levels be specified.

Advanced systems lend themselves to Numeric Limits because of historically reliable treatment, while non-active controls are less predictable. Advanced systems have been in use in some form since the mid-1990s. At this time, there are two general types of systems. With each general system the stormwater is retained on-site, treated, and released more slowly. One system employs polymer coagulation and sedimentation. The second system employs polymer coagulation with direct filtration. Both types of systems are considered reliable, and can consistently produce a discharge less than 10 NTU. These systems have been used successfully at many sites in several states since 1995 to reduce turbidity to very low levels. Non-active erosion and sediment control BMPs, while effective when applied and adequately maintained, produce more highly variable in effluent quality, making setting Numeric Limits difficult, if not impossible.

An important consideration in setting Numeric Limits or Action Levels is that in many locations in California the natural background turbidity and/or TSS levels in stormwater runoff are quite high. This is particularly true in semi-arid or arid regions, which tend to have less vegetative cover. For example, natural runoff concentrations in Emerald Creek, on the Newport Coast, above any developed areas have been over 5,000 mg/l during runoff events. The Los Angeles County Monitoring Data sets included an open land use watershed that also showed TSS levels significantly above other types of urban land uses. Therefore, it is important to consider natural background levels of turbidity or TSS in setting Numerical Limits or Action Levels for construction activities. The difficulty in determining natural background concentrations/levels for all areas of the state could make the setting of Numeric Limits or Action Levels impractical from an agency resource perspective.

While the Panel concludes that Numeric Limits or Action Levels are technically feasible, the Panel has several reservations and concerns.

1. The active treatment systems have generally been employed on sites five acres or larger. While the systems are technically feasible for sites of any size, including sites or drainages as small as an acre or less, the cost may be prohibitive. The cost-effectiveness of active treatment systems is greatly enhanced for large drainage areas, at which construction occurs for an extended period of time, over one or more wet season. There is also a more "passive" active system that is employed in New Zealand that uses captured rainfall to release the chemical into flows entering a detention system that requires less instrumentation and flow measurement infrastructure. Even more passive systems such as the use of polymer

logs and filter bags are currently under development for small sites. Regardless, the Panel recommends that the Board give particular attention to improving the application of cost-effective source controls to small construction sites.

2. In considering widespread use of active treatment systems, full consideration must be given to whether issues related to toxicity or other environmental effects of the use of chemicals has been fully answered. Consideration should be given to longer-term effects of chemical use, including operational and equipment failures or other accidental excess releases.
3. Consideration should be given to the seasonality of applying Numerical Limits. There may be sites where summer only construction that complies with Action Levels may be preferred to year-round that sites that include winter construction that complies with Numeric Limits. In such cases, applying Numeric Limits to summer construction may be a disincentive to scheduling active grading during dry periods. Allowing summer only construction sites to comply with action levels would discourage winter construction activities.
4. Consideration should be given to whether Numeric Limits would apply to all construction sites or only those with significant disturbed soil areas (e.g. active grading, un-vegetated and/or un-stabilized soils). A site could meet certain conditions to be considered "Stabilized" for the runoff season.
5. Where Numeric Limits are not feasible or where they would not apply during designated seasons or site conditions, the Panel recommends that the Board consider the concept of Action Levels for sites where only traditional erosion and sediment controls are applied or construction sites that are considered "stabilized" for the runoff season. An Action Level indicates a failure of BMPs (within some storm size limits).
6. The Board should consider Numeric Limits or Action Levels for other pollutants of relevance to construction sites, but in particular pH. It is of particular concern where fresh concrete or wash water from cement mixers/equipment is exposed to stormwater.
7. The Board should consider the phased implementation of Numeric Limits and Action Levels, commensurate with the capacity of the dischargers and support industry to respond.
8. The Panel recommends that a Numeric Limit or Action Level should be compared to the average discharge concentration. The minimum number of individual samples required to represent the average discharge concentration for a storm will need to be defined.
9. The Board should set different Action Levels that consider the site's climate region, soil condition, and slopes, and natural background conditions (e.g. vegetative cover) as appropriate and as data is available. With active treatment systems, discharge quality is relatively independent of these conditions. In fact, active treatment systems could result in turbidity and TSS levels well below natural levels, which can also be a problem for receiving waters.

10. The Board should consider whether the Numeric Limits or Action Levels should differ between receiving waters that are water quality limited with respect to turbidity, sediment or other pollutants associated with construction, from those water bodies that are not water quality limited.
11. The Panel recommends that Numeric Limits and Action Levels not apply to storms of unusual event size and/or pattern (e.g. flood events). The determination of Water Quality Capture Volume should consider the differing climate regions to specify these events.
12. The Board should set Numeric Limits and Action Levels to encourage loading reductions as appropriate as opposed to only numeric concentrations. Examples include phased construction (e.g. limited exposed soil areas or their duration), infiltration, and spraying captured runoff in vegetated areas as means to reduce loading.
13. The Panel is concerned that the monitoring of discharges to meet either the Action Levels or Numeric Limits may be costly. The Panel recommends that the Board consider this aspect.

Panel's Findings on Feasibility of Numeric Effluent Limits Applicable to Industrial Activities

Industrial Observations

The Panel believes that Numeric Limits are feasible for some industrial categories. Industries have control over their facilities. They control access, construction practices, product substitution to affect pollution prevention and the types of treatment systems to be used to mitigate stormwater runoff. There are many treatment systems or prevention practices that have been in place for lengthy periods, extending back to the 1980s in many cases. For example, there is much known today about construction materials, such as roofing materials (roofing composition, gutters, paints and coatings, products that abrade or tend to create solids or litter, etc). Other examples include development of pervious surfaces, or infiltration methods.

The decision for the value of Numeric Limits should be made in one of two ways. When there is a TMDL that defines the permissible load for a watershed, the Numeric Limits should be set to meet the TMDL. Consideration must be given for both the pollutant concentration as well as the volume of runoff, since both contribute to the impacts that required the TMDL to be implemented.

When there is no TMDL, the Numeric Limits should be based upon sound and established practices for storm water pollution prevention and treatment, using an approach analogous to that used in the NPDES wastewater process in the 1970s. In this approach phased, Numeric Limits were first set that were based upon the use of best currently available technology, and permittees were given a defined period for compliance. Permits were established based upon industry types or categories, with the recognition that each industry has its own specific problems and financial viability.

To establish Numeric Limits for industrial sites requires a reliable database, describing current emissions by industry types or categories, and performance of existing BMPs. The current industrial permit has not produced such a database for most industrial categories because of inconsistencies in monitoring or compliance with monitoring requirements. The Board needs to reexamine the existing data sources, collect new data as required and for additional water quality parameters (the current permit requires only pH, conductivity, total suspended solids, and either total organic carbon or oil and grease) to establish practical and achievable Numeric Limits.

In cases where the industrial activity is similar to activities covered by the MS4 permit (roofs, parking lots, etc), the approach or limits for industries should be the same as for MS4 permittees. In cases where the industrial activity is similar to land disturbance activities (e.g. landfills, gravel mines, etc.), there exists data and design experience with runoff control, capture and advanced treatments systems (e.g. systems using polymer to enhance total suspended solids removal – see

the construction section) that may make Numeric Limits feasible for new facilities, and the approach and limits should be the same as for construction permittees. The same conditions and issues related to active treatment discussed in the construction section apply here.

In cases where there is less certainty in the data for both stormwater characterization or BMP performance to establish Numeric Limits, there maybe sufficient data to establish Action Levels. Action Levels set for industrial sites that discharge to MS4s should not exceed those set for MS4 permittees.

The Panel recognizes that existing and new facilities may have to be treated differently and recommends the approach in **Table 2**.

Table 2- Approach to Establish Numeric Limits or Action Levels at Existing or New Facilities

		Numeric Limits	Action Levels	Notes
Existing Facility	Indoor	No	Yes, similar to MS4	
	Outdoor	Yes if data are adequate for the specific industrial activity and BMP	Yes, using industrial database	Action Levels should approach MS4 action levels.
New Facility	Indoor	Yes – BMP Database		Technology based, similar to MS4 New Development
	Outdoor	No, unless sufficient data exist for the specific industrial activity and BMP	Yes when sufficient data are available	

Industrial Recommendations

The Panel has several reservations and concerns:

- The Panel recognizes the inadequacy of current monitoring data sets and recommends improved monitoring to collect data useful for establishing Numeric Limits and Action Levels.
- Required parameters for future monitoring should be consistent with the type of industrial activity instead of the current parameters (i.e., monitor for heavy metals when there is reasonable expectation that the industrial activity will cause greater heavy metals concentrations in the storm water).
- Insofar as possible, the Panel prefers the use of California data (or National data if it can be shown to be applicable to CA) in setting Numeric Limits and Action Levels.
- The Panel recognizes that economies of scale exist for large facilities and large groups of single facilities.
- Industrial facilities that do not discharge to MS4s should have to implement BMPs for their non-industrial exposure (e.g., parking lots, roof runoff) similar to commercial facilities in MS4 jurisdictions.
- Regardless of Action Levels or Numeric Limits, the permittees should implement a suite of minimum BMPs – good housekeeping, employee training, preventing materials from exposure to rain, etc.
- SIC categories are not a satisfactory way of identifying industrial activities at any given site. The Board should develop a better method of characterizing industrial activities that can impact storm water.
- The Panel recognizes this is a large task and recommends prioritizing the implementation of this approach to achieve the greatest reduction of pollutants statewide.
- Increasingly, a number of industries have moved industrial activities indoors, preventing storm water pollution. The Panel recognizes that these facilities should be granted some sort of regulatory relief from industrial Numeric Limits or action levels, but should still be required to comply with MS4 permit requirements.

The Panel recognizes the need to make progress in monitoring and reducing storm water discharge from industrial facilities, but urges the Board to consider the total economic impact and not unduly penalize California industries with respect to industries outside of California.

EXHIBIT "12"

Linda S. Adams
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Arnold Schwarzenegger
Governor

April 18, 2008

Ms. Paula Higashi, Executive Director
Commission on State Mandates
980 Ninth Street, Suite 300
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Dear Ms. Higashi:

STORM WATER POLLUTION CONTROL REQUIREMENTS, FILES 03-TC-04, 03-TC-19, 03-TC-20, 03-TC-21: RESPONSE TO TEST CLAIMS 03-TC-04, 03-TC-19, 03-TC-20, 03-TC-21

The State Water Resources Control Board ("State Water Board") and the Los Angeles Regional Water Quality Control Board ("Los Angeles Water Board") jointly file this opposition to Test Claims 03-TC-04, 03-TC-19, 03-TC-20, and 03-TC-21. All of these test claims arise from a single permit that was issued by the Los Angeles Water Board as Order No. 01-182, Waste Discharge Requirements for Municipal Storm Water and Urban Runoff Discharges within the County of Los Angeles, and the Incorporated Cities therein, Except the City of Long Beach ("the Permit").[1] The requests for reimbursement in the test claims arise almost entirely from two requirements in the Permit and consolidation is therefore proper.

The Permit was issued by the Los Angeles Water Board pursuant to requirements in the federal Clean Water Act ("CWA").[2] The State Water Board and Los Angeles Water Board have been authorized by the United States Environmental Protection Agency ("U.S. EPA") to issue NPDES permits—which are mandated by the CWA—in lieu of issuance of these permits by U.S. EPA. The Permit regulates the discharge of storm water runoff from the municipal separate storm sewer system (MS4) of 84 cities and County of Los Angeles to rivers and the Santa Monica Bay.

The federal Clean Water Act mandates that municipalities must apply for and receive permits regulating discharges of pollutants from their MS4s to waters of the United States. Pursuant to federal regulations, the Permit contains numerous requirements for the cities and County to take actions to reduce the flow of pollutants into the rivers and the Bay, known as Best Management Practices (BMPs). These test claims, filed by 20 cities and the County, seek reimbursement by the State of California for expenses they incur in implementing two of the requirements of the Permit: (1) Inspections of commercial and industrial facilities; and (2) Placement of trash receptacles at transit sites.

[1] The Permit serves as National Pollutant Discharge Elimination System permit (NPDES) No. CAS004001. It was issued by the Los Angeles Water Board on December 13, 2001.

[2] Federal Water Pollution Control Act [FWPCA; 33 U.S.C.A. §§ 1251 et seq.] The federal Act is referred to herein by its popular name, the Clean Water Act ("CWA") and the code sections used are those for the CWA.

In order to obtain reimbursement, the claimants must show that the requirements constitute a new program or higher level of service. They must prove either: (1) the program must carry out a governmental function of providing services to the public, or (2) the requirements, to implement a state policy, impose unique requirements on local governments and do not apply generally to all residents and entities in the state. The claimants must also prove that the costs are mandated on them by the state, rather than by federal law. Finally, they must prove that any additional costs beyond the federal mandate are substantial and not *de minimis*. The claimants do not meet any of these tests.

The Permit as a whole, and including the inspection and trash receptacle provisions, is mandated on the local governments by federal law. The federal mandate applies to many dischargers of storm water, both public and private, and is not unique to local governments. The federal mandate requires that the Permit be issued to the local governments; it is not a question of "shifting" the costs from the state to the local governments. The specific requirements challenged are consistent with the minimum requirements of federal law. Even if the Permit were to be interpreted as going beyond federal law, any additional state requirements are *de minimis*. Moreover, the costs are not subject to reimbursement because the programs were proposed by the cities and County themselves, and because they have the ability to comply with these requirements through charges and fees, and are not required to raise taxes. The U.S. EPA has submitted a letter to the State Water Board dated April 10, 2008, in agreement with this position.[3]

Description of the Test Claims

The test claims focus on two discrete requirements in the Permit: the requirement to inspect certain industrial and commercial facilities that discharge into the MS4 and the requirement for some of the permittees to place and maintain trash receptacles at transit stops.

Industrial and Commercial Facilities Control Program (Part 4.C.)

Test claims 03-TC-19, 03-TC-20, and 03-TC-21 claim subvention for costs of complying with permit requirements to reduce pollutants from industrial and commercial facilities. Test claims 03-TC-19 and 03-TC-20 are limited to Part 4.C.2.a. and b., the requirements to inspect industrial and commercial facilities. Test Claim 03-TC-21 refers broadly to Part 4.C., the entire industrial and commercial facilities control program, but the costs discussed in the test claim are those associated with inspections. (See, Declaration of Richard Montevideo, No. 4.) Therefore, the Boards' analysis of the subvention claims for Part 4.C. is generally limited to the inspection requirements.

Part 4.C. of the Permit requires permittees to implement pollutant reduction and control measures at industrial and commercial facilities within their jurisdictions. Permittees may choose from various pollutant reduction and control measures, alone or in combination and

[3] Letter dated April 10, 2008, from Alexis Strauss, Director, Water Division, U.S. EPA to Tam M. Doduc, Chair, and Dorothy R. Rice, Executive Director, State Water Board, Attachment 3.

before, during, or after the activities that generate pollutants. The permittees are required to track, inspect, and ensure compliance at those facilities that are critical sources of pollutants in storm water.

Critical sources are specified commercial facilities (restaurants and automobile-related businesses), and industrial facilities that are required by federal regulations to obtain their own NPDES storm water permits.

Part 4.C.2.a. and b. contain inspection requirements, which are generally to conduct two inspections of facilities over a 5-year period. The Permit describes what the inspector must look at. (For example, inspectors at restaurants must see if operators pour grease into the street, and gas station inspectors must observe whether fuel-dispensing areas are swept.) The Permit states that for industrial sites, inspection requirements do not apply if the Los Angeles Water Board conducted an inspection of the site within two years.

Trash Receptacle Requirements (Part 4.F.5.c.3)

Test claims 03-TC-04, and 03-TC-20, and 03-TC-21 claim subvention for costs of complying with permit requirements for some of the permittees to place trash receptacles at public transit stops. Claim 03-TC-21 states that it challenges the entirety of the storm drain operation and maintenance and streets and road maintenance requirements, but the only costs in these sections for which it seeks reimbursement are for the placement and maintenance of trash receptacles. The claims are limited to the trash receptacle requirements for those municipalities that are not subject to a separate federal requirement, the "trash TMDL."[4] The requirements are to place trash receptacles at all transit stops and to maintain these receptacles.

Discharge Prohibitions and Receiving Water Limitations (Parts 1 and 2)

Test claim 03-TC-21 appears to claim subvention for costs associated with Parts 1 and 2 of the Permit, which include general prohibitions and requirements to protect water quality. The claim itself fails to specify any particular costs associated with this claim, other than a general study that considers a hypothetical treatment plant. As discussed below, storm water permits are written with the assumption that there will be no treatment plant and the permit certainly does not require one. In any event, there are no signed declarations to support this claim and no estimate of costs to the specific claimants.

Background of Federal Law Requirements for Storm Water Permits

In order to understand the federal mandate that required this permit, some background of the federal law and of MS4s is necessary. In 1972, the federal Clean Water Act was extensively amended to implement a permitting system for all discharges of pollutants from "point sources"

[4] As will be explained below, the Los Angeles Water Board has also adopted a federally-mandated total maximum daily load ("TMDL") for the deposition of trash into rivers and the Bay. The claimants do not claim subvention for the trash receptacle requirements for those cities and portions of the County subject to the TMDL, presumably conceding that those requirements are not reimbursable.

to waters of the United States.[5] The permits are issued pursuant to the national pollutant discharge elimination system, and are known as "NPDES permits." The 1972 amendments allowed U.S. EPA to authorize states to issue these permits.[6] California was the first state in the nation to obtain such authorization. In order to obtain this authorization, the California Legislature amended the Water Code, finding that the state should implement the federal law in order to avoid direct regulation by the federal government.[7] The California legislature mandated that California's permit program must ensure consistency with federal law.[8] The Water Boards are the state agencies charged with implementing the federal program.[9] The State Water Board incorporates the U.S. EPA regulations for implementing the federal permit program.[10] Therefore, both the CWA and U.S. EPA regulations are applicable to the permit program in California.[11] In California, permits to allow discharges into state waters are termed "waste discharge requirements."[12] The term "waste discharge requirements" is equivalent to the term "permit" in the CWA, when the waste discharge requirements are issued to comply with the CWA.[13] Thus, waste discharge requirements that the Water Boards issue to comply with the CWA are NPDES permits under federal law. When the Los Angeles Water Board, a state agency, adopts an NPDES permit in lieu of U.S. EPA, it must adopt as stringent a permit as the federal agency would have.[14]

The discharge of pollutants from point sources to waters of the United States is illegal, except in compliance with an NPDES permit.[15] In 1973, U.S. EPA issued regulations that exempted certain types of discharges it determined were administratively infeasible to regulate, including storm water runoff. The reason that such regulation is difficult, as will be more fully explained below, is that storm water runoff generally is not subjected to any treatment. Instead, it simply runs off urban streets, into gutters and drainage ways, and flows directly into streams, lakes, and the ocean.[16] This exemption was overruled in *Natural Resources Defense Council v. Costle* (1977) 568 F.2d 1369, which held that the exemption was illegal, and ordered U.S. EPA

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[5] CWA §§ 301 and 402.

[6] CWA § 402(b).

[7] Wat. Code, § 13370 *et seq.*, adding Chapter 5.5 to the Porter-Cologne Water Quality Control Act.

[8] Wat. Code, § 13372.

[9] Wat. Code, § 13370.

[10] Cal. Code of Regs., tit. 23, (C.C.R.) § 2235.2.

[11] The permits *may* also include additional state requirements. (C.C.R., tit. 23, § 2235.3; *City of Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4th 613.)

[12] Wat. Code, § 13263.

[13] Wat. Code, § 13374.

[14] CWA § 402(b).

[15] CWA § 301(a). In general, "navigable waters" or "waters of the United States," includes all surface waters, such as rivers, lakes, bays and the ocean. (CWA § 502.)

[16] The chief traditional categories of discharges subject to NPDES permits are industrial process wastewater and sanitary sewer effluent. Both of these discharges are typically processed in a treatment plant before they are discharged to surface waters.

to require NPDES permits for storm water runoff. In *Costle*, the court suggested innovative methods for permitting, including using general permits for numerous sources and issuing permits that "proscribe industry practices that aggravate the problem of point source Pollution."[17] Where permits proscribe actions that dischargers must implement, these requirements are commonly called "best management practices" ("BMPs").

Despite the *Costle* decision, U.S. EPA had not adopted regulations implementing a permitting program for storm water runoff by 1987. That year, Congress amended the CWA, specifically requiring storm water permits for industrial and municipal storm water runoff.[18] The amendments require NPDES permits for "[a] discharge from a municipal separate storm sewer system ["MS4"] serving a population of 250,000 or more."[19] The CWA contains three provisions specific to permits for MS4s: (1) Permits may be issued on a system- or jurisdiction-wide basis; (2) Permits must include a requirement to effectively prohibit non-storm water discharges into storm sewers; and (3) Permits must require controls to reduce the discharge of pollutants to the maximum extent practicable ("MEP").[20] In describing the controls that permits must include, the statute states that the controls shall include: "management practices, control techniques and system, design and engineering methods, and such other provisions as the [permit writer] determines appropriate for the control of such pollutants."[21] Thus, the federal law mandates that permits issued to MS4s must require management practices[22] that will result in reducing pollutants to the MEP. The state is required, by federal law, to select the BMPs.[23]

In 1990, U.S. EPA adopted regulations to implement section 402(p).[24] The regulations define which entities need to apply for permits and also the information they must include in permit applications. The regulations define "industrial activity" to include numerous categories of manufacturing, construction, and other typically private enterprises.[25] The regulations define MS4s as storm sewer systems operated by numerous public agencies, including cities, counties, states, and the federal government.[26] While both industrial activities and MS4s must

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[17] *Costle, supra*, at 1380.

[18] CWA § 402(p).

[19] CWA § 402(p)(2)(C). U.S. EPA defines municipal separate storm sewer systems (MS4s) that serve a population over 250,000 as "large" MS4s. The population of the County of Los Angeles is approximately 9.5 million. (Permit, D.1.)

[20] CWA § 402(p)(B).

[21] *Ibid.*

[22] These are commonly referred to as "best management practices," or "BMPs."

[23] *NRDC v. USEPA* (9th Cir. 1992) 966 F.2d 1292.

[24] Vol. 55, Federal Register (Fed.Reg.) 47990 and following.

[25] 40 C.F.R. § 122.26(b)(14).

[26] 40 C.F.R. § 122.26(b)(8).

obtain permits, the requirements in the industrial permits must be more stringent than in MS4 permits.[27]

In order to obtain coverage under an NPDES permit, as required by the CWA, entities seeking coverage file an application with the permitting authority and the permitting authority holds a public hearing on contested permits.[28] U.S. EPA regulations specify the information that applicants for MS4 permits must include in their applications.[29] For large and medium MS4s, the application requirements are extensive.[30] Some of the application requirements relevant to these Test Claims are: management programs including procedures to control pollution resulting from construction activities (at § 122.26(d)(1)(v)), legal authority to control the contribution of pollutants associated with industrial activity (at § 122.26(d)(2)(i)(A)), programs to control illicit discharges to the MS4 (at § 122.26(d)(1)(v)), and conducting inspections to determine compliance with permit conditions (at § 122.26(d)(2)(i)(F)). The permit applicants must propose management programs that the permitting authority will consider in adopting the permit.[31] The management programs must address oversight of discharges into the system from the general population and from industrial and construction activities within its jurisdiction, and also maintenance and control activities by the permittees.[32]

Most NPDES permits are largely comprised of numeric limitations for pollutants. Compliance is measured by sampling the treated effluent, which is discharged from a treatment plant into surface waters. These permits are written assuming that an engineered treatment plant can be built and operated to obtain a specified effluent. Storm water permits, on the other hand, usually require dischargers to implement BMPs that will result in lessening the pollutants in the runoff, since without a treatment plant the pollutants can flow directly into surface waters. Storm water permits apply to several types of entities—industries, construction, and municipalities—and all usually mandate BMPs. For municipalities that operate MS4s, the BMPs require the municipalities take actions that will lessen the incidence of pollutants *entering* storm drains by regulating the *behavior and practices* of the municipalities, their residents, and their businesses.[33]

U.S. EPA has issued regulations and guidance documents that discuss the types of BMPs that must be included in storm water permits in order to reduce the discharge of pollutants in storm

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[27] *Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3rd 1159. The differences between municipal and industrial permits are complicated, but are relevant to the question whether this permit addresses a uniquely governmental program, and are therefore discussed in more detail below.

[28] CWA § 402(b)(3).

[29] 40 C.F.R. § 122.26(a)(4). The U.S. EPA regulations have varied requirements depending on the size of the population served by the MS4. A "large" MS4 serves a population of 250,000 or more. (40 C.F.R. § 122.26(b)(4).) Los Angeles County and the 84 cities regulated by this permit far exceed the minimum population for a large MS4.

[30] 40 C.F.R. § 122.26(d).

[31] 40 C.F.R. § 122.26(d)(2)(iv).

[32] *Ibid.*

[33] There may also be engineered solutions, and there are some in Los Angeles, but it is important to keep in mind that there is no single engineered storm sewer treatment plant as there is for sanitary sewage.

water to the "maximum extent practicable." Numerous guidance documents point to inspections of businesses and proper trash collection as important parts of an effective BMP program.[34] U.S. EPA has issued an MS4 Program Evaluation Guide, which includes a lengthy process for conducting inspections of businesses. This Guide makes clear that inspections of businesses are mandatory:

> Inspections
> Most effective industrial/commercial inspection programs maintain a complete facility inventory and group them according to priorities established by the permittee. An inspection frequency is determined based on priority, and a database is used to manage such information as inspection findings, enforcement actions, and required follow-up activities. Many permittees use and cross-train existing staff to perform industrial/commercial inspections, but some permittees may need to maintain an exclusive stormwater inspector due to a potentially large number of high-priority facilities. There should be an inspection standard operating procedure that has been formalized and documented. It should include a checklist to be used during the inspection and possibly a report format. Inspectors should be aware of federal, state, and local stormwater regulations that may apply to industrial/commercial facilities. Inspectors should be familiar with various types of BMPs commonly used at the types of facilities typically found in the permit area and should be able to educate facility operators about such BMPs. In addition, inspectors should understand and use the permittee's established enforcement escalation response plan to gain compliance as necessary. The inspection staff should be proficient in the enforcement escalation procedure and should properly document all enforcement actions accordingly. Inspections should be used not only to identify non-compliance issues, but as an opportunity to educate facility operators about proper stormwater BMPs.[35]

The Guide also states that MS4 programs must address trash and litter.[36]

Adoption of the Los Angeles MS4 Permit

Starting in 1990, pursuant to the CWA amendments of 1987, the Los Angeles Water Board issued storm water permits to the County of Los Angeles and to the cities therein.[37] Without such a permit, the cities would be discharging pollutants in violation of federal law.[38] The permit

[34] See, e.g., Guidance documents at http://cfpub.epa.gov/npdes/docs.cfm?document_type_id=1&view=Policy%20and%20Guidance%20Documents&program_id=6&sort=name , including http://www.epa.gov/npdes/pubs/owm0233.pdf (citing examples from MS4 permits throughout the country).

[35] MS4 Program Evaluation Guidance, at pp. 77-78.

[36] *Id.* at 79.

[37] For reasons not relevant to this matter, one city—Long Beach—has a separate permit. The current permit covers 84 cities.

[38] CWA §§ 301(a), 402(p)(3)(B).

that is the subject of these test claims is the third such permit, and was adopted December 13, 2001.[39] It is largely comprised of requirements to implement BMPs, most of which were proposed by the permittees.[40] The County and thirty-two of the cities challenged numerous aspects of the permit and the process by which it was issued, culminating in a court of appeal decision upholding the permit in its entirety.[41]

On February 1, 2001, the County, on behalf of all permittees,[42] submitted a Report of Waste Discharge (permit application), including a Stormwater Quality Management Plan (SQMP). The SQMP constituted the permittees' proposal for the BMPs that would be required in the permit.[43] (Permit C.) The permit that was ultimately adopted was based on the SQMP, with some revisions and additions necessary to meet minimum federal requirements. (*Id.*) The SQMP prepared by the County included several proposed BMPs that relate to inspections of commercial and industrial facilities and placement and maintenance of trash receptacles:

> (1) Municipalities must conduct site visits to industrial and commercial facilities, including automotive service businesses and restaurants, which must include, "a site walk-through to verify for, at a minimum, evidence of BMP implementation," and shall revisit facilities and take enforcement where illicit discharges are found;[44]
>
> (2) Municipalities will maintain a database of automotive and food service facilities, including whether they have "NPDES stormwater permit coverage;"[45] and
>
> (3) Municipalities must minimize trash from entering recreational water bodies,[46] remove trash from open channels;[47] and control litter and debris in streets.[48]

The SQMP included detailed requirements for municipalities to implement at construction sites, including inspections by the municipality.[49] The SQMP proposed that all municipalities be

[39] NPDES permits generally expire after 5 years, and must be reissued thereafter.

[40] A single permit applies to the County and 84 cities. Thus, while some entities may disagree with some provisions, other entities will agree and the entire group may propose permit terms that some cities oppose. The entire group submits a single proposed storm water management plan.

[41] *County of Los Angeles v. State Water Resources Control Board* (2006) 143 Cal.App.4th 985; referred to hereafter as *County of Los Angeles*.

[42] All permittees include the County and 84 cities. The County and the 21 cities that filed these Test Claims participated jointly with the application and permitting procedures with the remaining 63 cities who did not file Test Claims.

[43] The SQMP is several hundred pages. Relevant sections are attached; the entire SQMP is available should the Commission request it.

[44] SQMP, pp. 22-23 and 28.

[45] *Ibid.*

[46] SQMP, ES-6

[47] SQMP, ES-7

[48] *Ibid.*

[49] SQMP, pp. 24-26.

required to collect trash along open channels and encourage voluntary trash collection in natural stream channels.[50] The SQMP contains an Illicit Connection and Illicit Discharge Elimination Program, which includes education of inspectors employed by the permittees who will investigate businesses.[51]

Following adoption of the permit and a petition to the State Water Resources Control Board ("State Water Board"), the County, 32 cities,[52] the Los Angeles County Flood Control District and industry groups representing builders filed suit challenging numerous provisions in the Permit. The Superior Court upheld the Permit, and the Court of Appeal affirmed the judgment in its entirety.[53] First, the court held that the permit as a whole "imposes reasonable pollutant discharge requirements." Because the minimum federal requirement is that the permit require the municipalities to reduce pollutants to the maximum extent practicable, the court clearly determined that the permit's requirement are MEP. In its discussion of the consideration of costs to the municipalities, the court found that the permit did not exceed any federal requirements:

> "The permit explicitly states it is intended to provide a cost-effective storm water pollution program to the maximum extent possible. The permit applies the same cost-effective analysis to efforts to reduce the flow of pollutants into receiving waters. Moreover, the [Los Angeles Water Board] in its finding referred to a report specifying how the 'maximum extent practicable' requirement includes considerations of costs and benefits."[54]

The court also discussed various cost analysis reports and U.S. EPA Guidance. It rejected the claim that the permit's requirements exceeded the federal mandatory standard. The court specifically upheld the inspection requirements, stating: "there is federal regulatory authority that required [the Los Angeles Water Board] to consider imposing the inspection requirements."

Several of the permittees filed these test claims with the Commission on State Mandates. The Commission rejected the claims, basing its determination on Government Code section 17516, subdivision (c), which exempted Water Board permits from the requirements to reimburse state-mandated local funds. That action also resulted in a Court of Appeal decision finding that subdivision to be unconstitutional and remanding to the Commission to determine the test claims.[55] In its decision, the court stated that the Commission must address factual issues

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[50] SQMP, p. 28

[51] SQMP, App. D

[52] These include 18 of the cities that filed the Test Claims, and Bellflower, Claremont, Diamond Bar, Gardena, Hawaiian Gardens, Industry, Irwindale, La Mirada, Lawndale, Monrovia, Paramount, Rosemead, Santa Clarita, Santa Fe Springs, Torrance, Walnut, and Whittier.

[53] *County of Los Angeles, supra.* Some of the determinations of the appellate court discussed here were not published and thus cannot be cited as precedent in other cases. They are binding on the claimants. A copy of the entire decision is attached.

[54] Unpublished decision, at p. 20.

[55] *County of Los Angeles v. Commission on State Mandates* (2007) 150 Cal.App.4th 898.

regarding the requirements to conduct inspections and to place and maintain trash receptacles constitute state or federal mandates.

Following *Commission on State Mandates*, each of the four test claims was re-filed without any revisions.[58] All of the test claims are based upon requirements in the permit. Test Claim 03-TC-04 was filed by the County of Los Angeles, and challenges the requirement to place trash receptacles at transit stops.[57] Test Claim 03-TC-19 was filed by the County of Los Angeles, and challenges the requirements to inspect industrial and commercial businesses.[58] Test Claim 03-TC-20 was filed by nine cities[59] and challenges the requirements for trash receptacles and inspections, and the general requirements for a construction program.[60] Test Claim 03-TC-21 was re-filed by ten cities[61] and challenges the following permit requirements: discharge prohibitions, receiving water limitations, industrial program, construction program, storm drain program, and street and road maintenance[62]. While Test Claims 03-TC-20 and 03-TC-21 appear to assert broader requests for reimbursement, they address in detail only the requirements for inspections and trash receptacles, and these are the only requirements that the court in *Commission on State Mandates* stated were subject to the test claims.[63] In light of the absence of the necessary information for such claims and the court's remand, we assume that any claims additional to the inspections and trash receptacles are not valid claims.

In addition to the litigation over this permit, cities made similar arguments against an MS4 permit adopted by the Santa Ana Regional Water Quality Control Board. In a published decision, an appellate court in that case made additional findings applicable to the arguments in this matter[64]. It found that there was no evidence to support an argument that the permit "exceeded federal requirements." This finding is important because the cities in *Rancho Cucamonga* had argued that a ground for overturning that permit was that it used the same provisions as had

[56] The State Water Board and Los Angeles Water Board received several Notices of Complete Test Filing: a letter dated October 16, 2007, stated 03-TC-21 was complete; a letter dated October 29, 2007, stated that 03-TC-04 was complete; a letter dated October 29, 2007, stated that 03-TC-19 was complete; and a letter dated December 12, 2007, stated 03-TC-20 was complete. On December 21, 2007, the Commission extended time to respond to all four test claims until April 21, 2008.

[57] 03-TC-04 challenges Permit Part 4.F.5.c.3.

[58] 03-TC-19 challenges Permit Part 4.C.2.a. and b.

[59] The cities that filed the test claim are Artesia, Azusa, Beverly Hills, Carson, Commerce, Norwalk, Rancho Palos Verdes, Westlake Village, and Vernon.

[60] 03-TC-20 challenges Permit Part 4.C.2.a. and b., 4.E, and 4.F.5.C.3.

[61] The cities that filed the test claim are Arcadia, Baldwin Park, Bellflower, Cerritos, Covina, Downey, Monterey Park, Pico Rivera, Signal Hill, South Pasadena, and West Covina.

[62] 03-TC-21 challenges Permit Parts 1, 2, 4.C, 4.E, 4.F.5 and 6. In a letter dated January 18, 2008, sent to the Commission from Howard Gest, he states that the cities he represents, which include five of the cities that filed the claim, "do not currently intend to pursue a claim" as to Parts 1 and 2, but that the limitation is "without prejudice." In light of the fact that Mr. Gest apparently does not represent all of the cities that filed the claim and the limited nature of this limitation, we will address Parts 1 and 2 and ask the Commission to determine that these parts do not create a reimbursable mandate.

[63] 150 Cal.App.4th 898, 903.

[64] *City of Rancho Cucamonga v. Regional Water Quality Control Board*, 135 Cal.App.4th 1377.

been crafted for other permittees, including the Los Angeles MS4 permit. The *Rancho Cucamonga* court specifically addressed inspection requirements, holding that federal law, either expressly or by implication, required NPDES permittees to perform inspections for illicit discharge prevention and detection, including inspection of industrial facilities and construction sites. Because the Los Angeles MS4 permit is based on BMPs and courts have determined that it is consistent with MEP, it is necessarily no more stringent than required by federal law.

State Mandate Law

Article XIIIB, Section 6 of the California Constitution requires subvention of funds to reimburse local governments for state-mandated programs in specified situations. There are several exceptions and limitations to the subvention requirements that provide bases for the Commission to determine that the Test Claims are not subject to subvention. Article XIIIB, Section 6 provides: "Whenever the Legislature or any state agency mandates a new program or higher level of service on any local government, the State shall provide a subvention of funds to reimburse that local government for the costs of the program or increased level of service."

Implementing statutes clarify that no subvention of funds is required if: (1) the mandate imposes a requirement that is mandated by a federal law or regulation and results in costs mandated by the federal government, unless the statute or executive order mandates costs that exceed the mandate in that federal law or regulation (Govt. Code, § 17556(c)); or (2) the local agency has the authority to levy service charges, fees, or assessments sufficient to pay (Govt. Code, § 17556(d)); or (3) the local agency proposed the mandate (Govt. Code, § 17556(a)). Each of these exceptions to subvention applies to these Test Claims. All of the mandates for which the Test Claims seek reimbursement are mandated by federal law or regulation. The County and cities can assess fees for all of the costs incurred. The claimants themselves, as part of the group of the County and 84 cities who applied for the permit, proposed most of the specific requirements challenged.

Numerous judicial decisions have further defined limitations on the requirements for subvention of funds. Specifically, subvention is only required if expenditure of tax monies is required, and not if the costs can be reallocated or paid for with fees.[65] In addition, reimbursement to local agencies is required only for the costs involved in carrying out functions peculiar to government, not for expenses incurred by local agencies as an incidental impact of laws that apply generally to all state residents and entities. Laws of general application are not entitled to subvention.[66] The fact that a requirement may single out local governments is not dispositive; where local agencies are required to perform the same functions as private industry, no subvention is required.[67]

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[65] *County of Los Angeles v. Commission on State Mandates* (2003) 110 Cal.App.4th 1176; *Redevelopment Agency v. Commission on State Mandates* (1997) 55 Cal.App.4th 976.

[66] *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46.

[67] *City of Richmond v. Commission on State Mandates* (1998) 64 Cal.App.4th 1190.

The Permit is not subject to subvention; it meets each of these exceptions. The requirements that are the subject of the claims are part of permits that meet, but do not exceed, the minimum federal requirements. The federal mandate is specifically directed at the municipalities and not at the state in general. The costs for the programs can be paid for by levying service charges, including charges to companies for conducting their businesses, fees for collection of refuse, fees for transit services, and fees especially enacted for storm water programs.[68] Compliance with NPDES permits, and specifically with storm water permits, is required by private industry also. In fact, the requirements for industrial and construction entities are more stringent than for government dischargers. In addition, the government requirements apply to all governmental entities that operate MS4s, including state and federal facilities; local government is not singled out. The local agencies can assess fees to perform the required tasks; tax monies are not required. Finally, to the extent that any portion of the claims would otherwise qualify for subvention, they are *de minimis* and therefore do not qualify.

In its remand, the court stated that the most significant issue is "whether the two obligations in question constitute federal or state mandates" and that these present factual issues for the Commission to decide.[69] The court pointed to four cases that the Commission stated would apply in making this determination.[70] Each case is discussed below:

City of Sacramento v. State of California (1990) 50 Cal.3d 51: The court held that application of unemployment insurance law to state and local agencies was not subject to subvention. In discussing whether the requirement was a federal mandate, the court held that the issue is whether compliance with the federal law was "mandatory" or "optional," which is based on the following factors: "A determination in each case must depend on such factors as the nature and purpose of the federal program; whether its design suggests an intent to coerce; when state and/or local participation began; the penalties, if any, assessed for withdrawal or refusal to participate or comply; and any other legal and practical consequences of nonparticipation, noncompliance, or withdrawal."[71]

Hayes v. Commission on State Mandates (1992) 11 Cal.App.4th 1564: The court considered claims for subvention for a special education mandate. It concluded that, although the program was a federal mandate, the state had freely chosen to shift the costs to local governments and that subvention was proper. The court held that the test for whether there is a federal mandate is whether compliance with federal requirements is "a matter of true choice," in other words whether participation in the federal program is "truly voluntary."[72] The court listed the significant factual determinations: "In our view the determination whether certain costs were imposed upon a local agency by a federal mandate must focus upon the local agency which is ultimately

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[68] The claimants refer to limitations on assessing services fees under California law. The referenced law concerns only the percent of voters who must approve the assessment. In fact, the largest entity subject to the permit, the City of Los Angeles, has successfully adopted such an assessment.

[69] *Commission on State Mandates*, 150 Cal.App.4th 898, 918.

[70] *Id.*, at 919.

[71] 50 Cal.3d 51, 76.

[72] 11 Cal.App.4th 1564, 1582.

forced to bear the costs and how those costs came to be imposed upon that agency. If the state freely chose to impose the costs upon the local agency as a means of implementing a federal program then the costs are the result of a reimbursable state mandate regardless whether the costs were imposed upon the state by the federal government."[73]

Long Beach Unified School District v. State of California (1990) 225 Cal.App.3rd 155: The court held that subvention does apply where actions are mandated by the state, which go beyond the federal constitution or case law. Because federal law clearly would not have required steps for de-segregation where there was no finding of segregation, subvention applied.

San Diego Unified School District v. Commission on State Mandates (2004) 33 Cal.4th 859: A school district sought subvention of funds to conduct expulsion hearings. The federal law made expulsions discretionary, but where expulsions occurred, the federal law mandated certain hearing procedures. The state law mandated expulsions whenever firearms were involved, and made all other expulsions discretionary. It also mandated some hearing procedures in addition to the federal requirements. The Supreme Court held that for firearms expulsions, the state mandated a higher level of service, and that all hearing costs for these expulsions were reimbursable, even those attributable to procedures mandated by federal law. It also held that no hearing costs are reimbursable for expulsions that are discretionary under state law. Even if the hearing procedures are mandated by state law, the court found they are incidental to federal due process requirements and are *de minimis* and therefore not reimbursable. In determining that any additional state-mandated hearing costs were *de minimis*, the court found that the state reasonably set forth requirements that were intended to implement the federal hearing requirements: "challenged state rules or procedures that are intended to implement an applicable federal law-and whose costs are, in context, *de minimis*-should be treated as part and parcel of the underlying federal mandate."[74]

The Claims do not Qualify for Subvention

The Programs are Federal Mandates that Apply Directly to Local Governments; the State has not Shifted the Burden; and the Mandates do not Exceed Federal Law

The challenged provisions are mandated by federal law. Two appellate courts have determined that the provisions in this permit constitute MEP—the minimum requirements mandated by federal law. The court in *Los Angeles* has determined that the Permit is cost-effective and based on the MEP standard. The court in *Rancho Cucamonga* found that a very similar permit met the MEP standard and did not exceed the minimum federal standard. That case specifically stated that the requirement to conduct inspections reflected MEP. The federal law specifically requires that permits be issued to the local governments that operate MS4s and that permits must require programs and actions that will result in reducing the pollutants that discharge from the MS4 to waters of the United States to the maximum extent practicable. The permit is a federal mandate on the local governments. It is the local governments that must apply for and obtain a permit. Without the permit, the cities are discharging pollutants in violation of federal

[73] *Id.* at 1593-4.

[74] 33 Cal.4th 859, 889.

law.[75] If the Water Boards had not been authorized to issue the permit in lieu of U.S. EPA, that federal agency would have issued a similar permit directly to the local governments.

The claimants contend that the Los Angeles Water Board exercised discretion to impose requirements beyond those required by federal law because the Los Angeles Water Board had a choice in establishing the mandated programs and "[t]he [Water Boards] cannot point to any provisions of the Clean Water Act or related regulations that require the programs at issue in this claim."[76] The fact that some discretion is exercised in implementing a federal program does not mean that subvention is required. The court in *Hayes* explained that, where the state has some discretion in mandating the program but ultimately the factual situation requires some type of mandate, there is a federal mandate:

> "The remaining question is whether the state's participation in the federal program was a matter of "true choice" or was "truly voluntary." The alternatives were to participate in the federal program and obtain federal financial assistance and the procedural protections accorded by the act, or to decline to participate and face a barrage of litigation with no real defense and ultimately be compelled to accommodate the educational needs of handicapped children in any event. We conclude that so far as the state is concerned the Education of the Handicapped Act constitutes a federal mandate."[77]

The central issue before the Commission is whether the requirements to conduct inspections and to place trash receptacles at bus and train stops exceed the federal mandate for MS4 permits. As to the inspections, the claimants appear to concede that federal law specifically requires MS4s to conduct inspections of industrial facilities and construction sites, but claim that the Los Angeles Water Board could have conducted all of the inspections and instead exercised its discretion to "shift" the responsibility to the claimants. They base this contention on a permit issued by the State Water Board to industrial facilities[78] and contend that permit obligates the Regional Water Boards, including Los Angeles, to conduct inspections. Therefore, they claim, the Los Angeles Water Board has shifted that responsibility to the municipalities. They also contend that the federal law does not specify that restaurants and automobile-related businesses must be inspected. As to the trash receptacles, they claim that the federal law does not specify this particular BMP.

In order to evaluate these contentions, some more detailed discussion of the storm water permitting scheme established by U.S. EPA is necessary. Of particular importance are: the process of selecting BMPs that are included in MS4 permits; the obligation of MS4s to regulate discharges from businesses into their systems, including discharges that are simultaneously regulated by separate NPDES permits; the process for selecting which businesses to regulate; and the requirement for MS4s to conduct inspections.

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[75] CWA §§ 301(a), 402(p)(3)(B).

[76] Test Claim 03-TC-21, at page 10.

[77] 11 Cal.App.4th 1564, 1593.

[78] Order No. 97-03-DWQ; http://www.waterboards.ca.gov/stormwtr/docs/induspmt.pdf

The Process for Selecting BMPs

The chief argument regarding trash receptacles is that the federal law does not specify this particular BMP and that, therefore, it exceeds federal law. The claimants appear to rely on *Hayes* to argue that the exercise of any discretion in selecting requirements automatically results in a reimbursable state mandate. As discussed above, however, the federal law specifically requires that the Water Boards prescribe the BMPs that the MS4 must implement. This issue was addressed succinctly in *Rancho Cucamonga*:

> In creating a permit system for dischargers from municipal storm sewers, Congress intended to implement actual programs. [Cite to *NRDC, supra.*] The Clean Water Act authorizes the imposition of permit conditions, including: "management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants." [Cite to CWA § 402(p)(3)(B)(iii).] The Act authorizes states to issue permits with conditions necessary to carry out its provisions. [Cite to § 402(a)(1).] The permitting agency has discretion to decide what practices, techniques, methods and other provisions are appropriate and necessary to control the discharge of pollutants. [Cite to *NRDC.*] That is what the Regional Board has created in the 2002 permit."[79]

Because the federal mandate requires the Water Boards to choose specific BMPs that are included in MS4 permits as requirements, the "discretion" exercised in selecting those BMPs is necessarily a part of the federal mandate. It is not comparable to the discretion that the courts in *Hayes* or *San Diego* spoke of, where the state truly had a "free choice." The Los Angeles Water Board was mandated by federal law to select BMPs that would result in compliance with the federal MEP standard. "The [Water Board] must comply with federal law requiring detailed conditions for NPDES permits."[80] This is completely different from the state discretion exercised in *San Diego*, where the state law compelled expulsions for bringing firearms to school, while the federal law clearly did not mandate such expulsions. Therefore, it is clear that the mere exercise of discretion in selecting BMPs, does not create a reimbursable mandate.

It is conceivable that an MS4 permit issued in California could require practices that exceed the federal requirement of MEP. It is clear, however, that inspection requirements do not exceed MEP. That issue has been specifically ruled on by *Rancho Cucamonga* and there are federal regulations, discussed below, that require these inspections. The claimants allege, however, that there is no similar requirement for the placement of trash receptacles at transit stops. The trash receptacle requirements in the Permit are different for those cities subject to a "trash TMDL" than for other cities. The Los Angeles Water Board has adopted TMDLs for some of the water bodies that receive discharges from MS4s subject to the permit. As required by the TMDL and federal law, the permit contains specific provisions for permittees that are subject to the trash TMDLs. The claimants do not seek subvention for those requirements. For

[79] *Rancho Cucamonga, supra,* at 1389.

[80] *Ibid.*

permittees not subject to a trash TMDL, the permit requires they implement BMPs to reduce trash entering the MS4s, including placing trash receptacles at all transit stops that have shelters by August 1, 2002, and at all other transit stops by February 3, 2003, and that they maintain trash receptacles as necessary. (Permit, Part 4.F.5.c.3.)

The requirements regarding trash receptacles are found in the section of the Permit concerning public agency activities. (Part 4.F.) This section imposes BMPs concerning sewage treatment overflows, construction by public agencies, storm drain maintenance and operation, and municipal construction projects. In other words, these are BMPs concerning the municipalities' own activities, as opposed to its regulation of discharges into its system by others. U.S. EPA storm water regulations address BMP requirements for the MS4s' maintenance and operation of the storm sewer system. Specifically, the MS4s' plan must include maintenance activities and schedules, including a "description of practices for operating and maintaining public streets, roads and highways and procedures for reducing the impact on receiving waters of discharges from municipal storm sewer systems. . ."[81] As early as 1993, the Executive Officer of the Los Angeles Water Board directed all of the cities regulated by the permit to "increase cleaning frequency of and number of roadside trash receptacles in areas where needed."[82]

The requirements to control the release of trash into MS4s and surface waters are at the heart of the storm water program. "Storm sewer waters carry suspended metals, sediments, algae-promoting nutrients (nitrogen and phosphorus), *floatable trash*, used motor oil, raw sewage, pesticides, and other toxic contaminants into streams, rivers, lakes, and estuaries across the United States."[83] In carrying out the federal mandate to select BMPs, the decision to require trash receptacles at transit stops is a reasonable, practicable, and cost-effective method to reduce trash in storm water runoff. The claimants have not, and cannot, explain how such a requirement exceeds the federal standard of actions that reflect the "maximum extent practicable." The Permit also allows individual permittees to substitute BMPs for specific requirements in the Permit.[84]

At bottom, the trash receptacle requirements reflect the federal requirement to reduce pollutants from the MS4 to the maximum extent practicable. It is federal law that animates the requirement and federal law that mandates specificity in describing the BMPs.

The Role of MS4s in Regulating Discharges from Industrial and Commercial Activities

The claimants allege that because the Water Boards have a role in directly regulating businesses within the jurisdiction of MS4s, and therefore conduct inspections at such sites, that the requirements in the Permit for the MS4s to conduct inspections reflect a decision to shift the costs of a federal mandate from the state to local government. The court in *Hayes* discussed

[81] 40 C.F.R. § 122.26(d)(2)(iv)(A)(3).

[82] Letter dated June 17, 1993, from Robert P. Ghirelli to Thomas A. Tidemanson. Attachment 34.

[83] *Environmental Defense Center v. U.S. EPA* (9th Cir. 2003) 344 F.3d 832, 841; emphasis added.

[84] Permit, Part 4.A.1.

this issue. There, the mandate was to the state generally, and the state government decided to shift the cost for implementing special education to local school districts. Here, there is no general mandate addressed to the entire state. Instead, the federal law clearly required that municipalities that operate MS4s must obtain and comply with a permit. The state does not operate the MS4; the mandate is directed to the municipalities.

In addition to the requirements for permits issued to municipalities, the Water Boards are also mandated to issue permits to entities that discharge storm water "associated with industrial activity."[85] As part of its responsibilities for its in lieu program, the State Boards must administer and enforce all of its permits.[86] The State Water Board has issued permits for industrial and construction discharges of storm water, and the Los Angeles Water Board administers those permits within its jurisdiction. Therefore, the Los Angeles Water Board does conduct inspections at businesses in Los Angeles County to ensure compliance with the state permits. In addition, the MS4 Permit requires the permittees also to conduct inspections. This approach, which may result in two different entities inspecting the same businesses to review storm water practices, was specifically envisioned and required by U.S. EPA in adopting its storm water regulations.[87]

In promulgating its regulations for MS4s and industrial dischargers, U.S. EPA made clear its intent to require industrial facilities that discharge into municipal storm sewers to obtain their own NPDES permits and *also* to require MS4s to regulate and be liable for these same discharges. In 1990, U.S. EPA adopted the regulations that spell out the federal mandates for MS4s to develop and implement plans for regulation of industrial facilities. In its Preamble to the regulations, it explained that MS4 permits "are expected to require that controls be placed on storm water discharges associated with industrial activity which discharge through the municipal system." It presented the rationale for this dual regulatory approach:

> "[U.S. EPA] believes that municipal operators of large and medium municipal systems have an important role in source identification and the development of pollutant controls for industries that discharge storm water through municipal separate storm sewer systems is appropriate. Under the CWA, large and medium municipalities are responsible for reducing pollutants in discharges from municipal separate storm sewers to the [MEP]. Because storm water from industrial facilities may be a major contributor of pollutants to municipal separate storm sewer systems, municipalities are obligated to develop controls for storm water discharges associated with industrial activity through their system in their storm water management program."[88]

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[85] CWA § 402(p)(2)(B).

[86] CWA § 402(b).

[87] In fact, the Los Angeles Water Board acted to lessen any duplication of effort and costs to the municipal permittees by exempting them from inspection requirements if the same facility has been inspected by the Board.

[88] Vol. 55, Federal Register (Fed.Reg.), at 48009.

Thus, U.S. EPA specifically mandated that industrial facilities were to be subject to permits issued directly to them by the Water Boards and also through MS4 permits, where municipalities must regulate the facilities: "Dischargers of storm water associated with industrial activity through municipal separate storm sewer systems will be subject to municipal management programs that address such discharges as well as to an individual or general NPDES permit for those discharges."[89]

Requirements for MS4s to Conduct Inspections

The federal regulations also specifically require local storm water agencies, as part of their responsibilities under NPDES permits, to conduct inspections.[90] Throughout the federal law, there are numerous requirements for entities that discharge pollutants to waters of the United States to monitor and inspect their facilities and their effluent.[91] The claimants are the dischargers of pollutants into surface waters; as part of their permit allowing these dischargers, they must conduct inspections. The Los Angeles Water Board is charged with administering and enforcing the permit. Its policing responsibilities may also include inspecting the facilities and waters it regulates, but that does not mean it is shifting its responsibilities when it properly mandates inspections by MS4s.

The Process of Selecting Which Businesses MS4s Must Regulate

The claimants contend that federally mandated inspections do not include restaurants, automotive service facilities, retail gasoline outlets, or automotive dealerships. Instead, they claim that the federal mandate is limited to municipal landfills, hazardous waste sites, industrial facilities listed under the federal Superfund law, and industrial facilities that the permittees themselves determined are contributing substantial pollutants to their systems.

They base this contention on the U.S. EPA's regulations for MS4 applications. The federal regulation states that the storm water management plan that MS4s must submit must address the municipalities' enforcement against pollutants from "municipal landfills, hazardous waste treatment, disposal and recovery facilities, industrial facilities that are subject to section 313 of title III of [the federal Superfund law], and *industrial facilities that the municipal permit applicant determines are contributing a substantial pollutant loading to the municipal storm sewer system.*"[92] The claim is essentially that, after MS4s submitted their first application for a permit, which was required by the U.S. EPA regulations in 1990,[93] and listed any industrial facilities they deemed to be contributors of substantial pollutant loading, the federal law did not mandate any further actions, regardless of whether new information or monitoring might reveal such

[89] *Id.* at 48058.

[90] 40 C.F.R. § 122.26(d)(2)(iv)(C). While the U.S. EPA regulations are phrased as "application requirements," wherein the MS4 must propose the various BMPs that will achieve MEP, these requirements must be included in the mandatory storm water management program. (*Los Angeles, supra,* 143 Cal.App.4th 985, 993.)

[91] See, e.g. CWA § 402(b)(2)(B); 40 C.F.R. § 122.44(i).

[92] 40 C.F.R. § 122.26(d)(2)(iv)(C); emphasis added.

[93] Vol. 55, Fed.Reg. 47990.

contributors. This is not a reasonable reading of the federal regulation. In adopting this regulation, U.S. EPA acknowledged that this initial selection by MS4s was only a starting point and that the mandate was to follow where information and monitoring led:

> "The object of [the requirements in 122.26(d)(2)(iv)(C)] is initially to set priorities for monitoring requirements. Then, if the situation requires controls can be developed and instituted. . . . the selection of facilities is only a means of setting priorities for facilities for the development of municipal plans. ¶ EPA agrees. . . that there will be other facilities that are significant sources of pollutants and should be addressed by municipalities as soon as possible under management programs."

As early as 1993, the Executive Officer of the Los Angeles Water Board directed all of the cities regulated by the permit to implement facility inspections of "auto repair shops, auto body shops, auto parts and accessory shops, gasoline stations, and restaurants."[94] The letter noted that the BMPs listed therein constitute the minimum required for area-wide implementation, and that the list "is not an additional requirement, but incorporates BMPs already proposed by some permittees." Thus, it appears that the inspection requirements were, in fact, proposed by permittees.[95] In any event, MEP is not limited to the sources and controls proposed by the permittees. U.S. EPA Guidance documents make clear that MEP requires an iterative process, where municipalities assess sources, conduct investigations, and improve their programs.[96]

The Local Governments have the Authority to Levy Service Charges, Fees, or Assessments to Pay for the Programs

The County and cities need not spend tax monies to comply with the Permit. They can and do adopt fees from their residents and businesses that fund their storm water programs. The City of Los Angeles (the largest entity covered by the permit, and which has not filed any test claims) adopted a fee ordinance, based on property assessments, for implementation of the program. All of the municipalities have the ability to charge fees to businesses to cover inspection costs. The cities' trash collection responsibilities, which include placement of trash receptacles, are also paid for through existing fees. Moreover, the trash receptacle requirements that are the subject of the Test Claims are limited to public transit stops. Any additional costs associated with trash removal at these transit stops, a service cities already provide, could be borne by transit users through higher transit fees.

The cities and the County have failed to show that they must use tax monies to pay for these requirements. It is also clear that any "additional" costs that could conceivably be considered additional to the federal mandate would be *de minimis* and would not require payment from tax monies. For example, it is assumed that most cities routinely place trash receptacles at bus stops. In fact, the claimants make no allegation of any increased costs from this requirement;

[94] Letter dated June 17, 1993, from Robert P. Ghirelli to Thomas A. Tidemanson. Attachment 34.

[95] The issue of proposals by the permittees is discussed below.

[96] See, e.g. U.S. EPA document on Evaluating the Effectiveness of Municipal Storm Water Programs.

instead, they conflate any costs by listing "estimated trash receptacles, catch basin, and/or other treatment devices – capital and installation costs."[97]

The Local Governments Applied for the Permit and Proposed the Programs

The County and cities bound by the permit requested the mandate and the Permit allows alternatives in the manner of compliance. The County and cities jointly applied for the permit and proposed a management plan that is consistent with many of the requirements in the permit. Relevant portions of the Report of Waste Discharge that the County submitted are attached. The entire Report of Waste Discharge is available upon request. It is clear from these attachments, which include not only proposed programs but a draft permit, that many of the programs subject to the claims—including regulation of industrial and commercial sites, and specifically restaurants and automobile-service businesses—were proposed in the permittees' original plan submitted in February 2001. For example, the permittees proposed that the permit prohibit discharge of wash waters from gas stations, auto repair garages, and other automotive service facilities.[98] In addition, the permittees proposed a requirement that they "visit" automotive service and food service facilities every two years, and that they "revisit" facilities and take enforcement action if there is evidence of continuing illicit discharges.[99] The permittees submitted a lengthy list of proposed BMPs that site inspectors should look for during site visits.[100] Whether the term is "site visit" or "inspection," it is clear that the permittees proposed the mandate. The permittees also proposed that the permit mandate trash collection alongside, or in improved open channels.[101]

The permit was issued upon the joint request of all of the petitioners, with the County acting as the lead. Where the County and 84 cities apply for a single area-wide permit, the permit writer obviously is not required to write separate requirements for each entity and the County may be presumed to speak for the whole.

The Programs are not Mandates Peculiar to Government

Finally, the NPDES permit program, and the storm water requirements specifically, are not peculiar to local government. Industrial and construction facilities must also obtain NPDES storm water permits. These permits, however, are more stringent than municipal permits because the federal law requires that they meet more stringent technology-based standards and that they attain strict compliance with water quality standards in receiving waters.[102] As such, the only difference between the municipal storm water program and other storm water requirements is that federal law provides separate, more lax requirements for the municipalities.

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[97] Claim 03-TC-21, at p.2.

[98] Report of Waste Discharge at R0000026.

[99] *Id.* at R0000031.

[100] *Id.* at R0000273 – R0000360.

[101] *Id.* at R0000036.

[102] *Defenders of Wildlife v. Browner, supra.*

The Water Boards' implementation of federal law reflects this dichotomy and the fact that the municipalities receive their own permit, as required by CWA section 402(p)(3)(B) does not change the fact that storm water permit requirements are not peculiar to local government.

It is the municipalities who operate MS4s and who discharge pollutants to surface waters. It is the municipalities who must obtain permits and comply with those permits. Similarly, industrial dischargers who discharge storm water runoff to waters of the United States must also obtain and comply with permits. The state is not the discharger (except in those situations where state agencies operate MS4s, such as the Department of Transportation, where they are themselves subject to permits), and the state is not uniquely shifting a new program or higher level of service onto municipalities.[103]

Discussion of Test Claims that were not Substantiated

Development Construction Program (Part 4.E)

Test claim 03-TC-21 claims subvention of costs for the development construction program. It did not, however, include any substantiation of this claim.

Public Agency Activities Program (Part 4.F.5 and 6)

Test claims 03-TC-04, 03-TC-20, and 03-TC-21 claim subvention for portions of the public agency activities program. Test claim 03-TC-21 claims subvention for the all requirements concerning storm drain operation and streets and roads maintenance, while test claims 03-TC-04 and 03-TC-20 are limited to the requirements to place trash receptacles at transit stops and to maintain these receptacles. Test claim 03-TC-21, however, did not include any substantiation of this claim, apart from the discussion of trash receptacles, above.

Discharge Prohibitions and Receiving Water Limitations (Parts 1 and 2)

Test claim 03-TC-21 challenges the discharges prohibitions and receiving water limitations in the Permit. Parts 1 and 2 contain the basic prohibitions and requirements for attaining compliance with water quality standards through an iterative process. The whole of the claim is that, "if enforced and read to literarily [*sic*] to require the City to prevent any and all exceedances from urban runoff of all water quality standards or water quality objectives" the costs would be excessive. The court in *County of Los Angeles, supra,* rejected this exaggeration of the permit's terms and found the requirements to be entirely reasonable. In addition, the *Rancho Cucamonga* and *Building Industry Association* both upheld identical provisions and found them to be reasonable and to be consistent with the minimum federal standard of MEP.

[103] The State Water Board issues a separate permit to the Department of Transportation, for both its municipal activities (roads and freeways) and its industrial facilities (construction and maintenance yards). The permit is available at http://www.waterboards.ca.gov/stormwtr/docs/caltrans/caltranspmt.pdf.

Conclusion

For all the reasons set forth above, the Test Claims must be dismissed. The Permit requirements have already been upheld by the courts as reflecting the federal Clean Water Act's requirements for municipal storm water permitting. The permit in its entirety, including the Test Claim provisions, reflects the federally mandated, federal minimum standard of reducing pollutants to the "maximum extent practicable." Further, the cities can pay for any costs associated with the requirements by levying service charges or fees. Finally, to the extent that any portion of the claims would otherwise qualify for subvention, they are *de minimis* and therefore do not warrant subvention.

I certify and declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this document was executed on April 18, 2008, at Sacramento, California.

Sincerely,

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Continued on next page

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Interested Persons List

PROOF OF SERVICE

I, JEANNETTE L. BASHAW, declare that I am over 18 years of age and not a party to the within action. I am employed in Sacramento County at 1001 I Street, 22nd Floor, Sacramento, California 95814. My mailing address is P.O. Box 100, Sacramento, CA 95812-0100. On this date, I served the within documents:

LETTER TO COMMISSION ON STATE MANDATES DATED APRIL 18, 2008, REGARDING STORM WATER POLLUTION CONTROL REQUIREMENTS, FILES 03-TC-04, 03-TC-19, 03-TC-20, 03-TC-21: RESPONSE TO TEST CLAIMS 03-TC-04, 03-TC-19, 03-TC-20, 03-TC-21

	BY FACSIMILE: I caused a true and correct copy of the document to be transmitted by a facsimile machine compliant with rule 2003 of the California Rules of Court to the offices of the addresses at the telephone numbers shown on the service list.
X	**BY HAND DELIVERY:** I caused a true and correct copy of the document(s) to be hand-delivered to the person(s) as shown.
	BY OVERNIGHT MAIL TO ALL PARTIES LISTED: I am readily familiar with my employer's practice for the collection and processing of overnight mail packages. Under that practice, packages would be deposited with an overnight mail carrier that same day, with overnight delivery charges thereon fully prepaid, in the ordinary course of business.
X	**BY FIRST CLASS MAIL TO ALL PARTIES LISTED:** I am readily familiar with my employer's practice for the collection and processing of mail. Under that practice, envelopes would be deposited with the U.S. Postal Service that same day, with first class postage thereon fully prepaid, in the ordinary course of business. I am aware that on motion of the party served, service is presumed invalid if the postal cancellation date or postage meter date is more than one day after the date of deposit for mailing shown in this proof of service.

By placing a true copy thereof in separate, sealed envelopes addressed to:

See Exhibit A attached hereto and made a part hereof.

I certify and declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this document was executed on April 18, 2008, at Sacramento, California.

Jeannette L. Bashaw

JEANNETTE L. BASHAW

EXHIBIT A

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SECTION 7 –

DOCUMENTATION

IN SUPPORT OF TEST CLAIMS IN RE SANTA ANA RWQCB

ORDER NO. R8-2009-0030

(NPDES NO. CAS618030)

VOLUME IV

MISCELLANEOUS AUTHORITIES

(Exhibits 13 – 18)

INDEX TO SECTION 7 DOCUMENTATION

VOLUMES III AND IV – MISCELLANEOUS AUTHORITIES

VOLUME III

INDEX TO SECTION 7 DOCUMENTATION

MISCELLANEOUS AUTHORITIES

EXHIBIT "13"

Federal Register

Thursday,
May 18, 2000

Part III

Environmental Protection Agency

40 CFR Part 131

Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California; Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 131

[FRL–6587–9]

RIN 2040–AC44

Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: This final rule promulgates: numeric aquatic life criteria for 23 priority toxic pollutants; numeric human health criteria for 57 priority toxic pollutants; and a compliance schedule provision which authorizes the State to issue schedules of compliance for new or revised National Pollutant Discharge Elimination System permit limits based on the federal criteria when certain conditions are met.

EPA is promulgating this rule based on the Administrator's determination that numeric criteria are necessary in the State of California to protect human health and the environment. The Clean Water Act requires States to adopt numeric water quality criteria for priority toxic pollutants for which EPA has issued criteria guidance, the presence or discharge of which could reasonably be expected to interfere with maintaining designated uses.

EPA is promulgating this rule to fill a gap in California water quality standards that was created in 1994 when a State court overturned the State's water quality control plans which contained water quality criteria for priority toxic pollutants. Thus, the State of California has been without numeric water quality criteria for many priority toxic pollutants as required by the Clean Water Act, necessitating this action by EPA. These Federal criteria are legally applicable in the State of California for inland surface waters, enclosed bays and estuaries for all purposes and programs under the Clean Water Act.

EFFECTIVE DATE: This rule shall be effective May 18, 2000.

ADDRESSES: The administrative record for today's final rule is available for public inspection at the U.S. Environmental Protection Agency, Region 9, Water Division, 75 Hawthorne Street, San Francisco, California 94105, between the hours of 8:00 a.m. and 4:30 p.m. For access to the administrative record, call Diane E. Fleck, P.E., Esq. at 415 744–1984 for an appointment. A reasonable fee will be charged for photocopies.

FOR FURTHER INFORMATION CONTACT: Diane E. Fleck, P.E., Esq. or Philip Woods, U.S. Environmental Protection Agency, Region 9, Water Division, 75 Hawthorne Street, San Francisco, California 94105, 415–744–1984 or 415–744–1997, respectively.

SUPPLEMENTARY INFORMATION: This preamble is organized according to the following outline:

A. Potentially Affected Entities

Citizens concerned with water quality in California may be interested in this rulemaking. Entities discharging pollutants to waters of the United States in California could be affected by this rulemaking since water quality criteria are used by the State in developing National Pollutant Discharge Elimination System (NPDES) permit limits. Categories and entities that ultimately may be affected include:

Category	Examples of potentially affected entities
Industry	Industries discharging pollutants to surface waters in California or to publicly-owned treatment works.
Municipalities	Publicly-owned treatment works discharging pollutants to surface waters in California

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be affected by this action. This table lists the types of entities that EPA is now aware could potentially be affected by this action. Other types of entities not listed in the table could also be affected. To determine whether your facility might be affected by this action, you should carefully examine the applicability criteria in § 131.38(c). If you have questions regarding the applicability of this action to a particular entity, consult the persons listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

B. Introduction and Overview

1. Introduction

This section introduces the topics which are addressed in the preamble and provides a brief overview of EPA's basis and rationale for promulgating Federal criteria for the State of California. Section C briefly describes the evolution of the efforts to control toxic pollutants; these efforts include the changes enacted in the 1987 CWA Amendments, which are the basis for this rule. Section D summarizes California's efforts since 1987 to implement the requirements of CWA section 303(c)(2)(B) and describes EPA's procedure and actions for determining whether California has fully implemented CWA section 303(c)(2)(B). Section E provides the rationale and approach for developing this final rule, including a discussion of EPA's legal basis for this final rule. Section F describes the development of the criteria included in this rule. Section G summarizes the provisions of the final rule and discusses implementation issues. Sections H, I, J, K , L, M, N, O, P, and Q briefly address the requirements of Executive Order 12866, the Unfunded Mandates Reform Act of 1995, the Regulatory Flexibility Act, the Paperwork Reduction Act, the Endangered Species Act, the Congressional Review Act, Executive Order 13084, Consultation and Coordination with Indian Tribal Governments, the National Technology Transfer and Advancement Act, and Executive Order 13132, Federalism, respectively.

The proposal for this rulemaking was published in the **Federal Register** on August 5, 1997. Changes from the proposal are generally addressed in the body of this preamble and specifically addressed in the response to comments document included in the administrative record for this rulemaking. EPA responded to all comments on the proposed rule, including comments received after the September 26, 1997, deadline. Although EPA is under no legal obligation to respond to late comments, EPA made a policy decision to respond to all comments.

Since detailed information concerning many of the topics in this preamble was published previously in the **Federal Register** in preambles for this and other rulemakings, references are frequently made to those preambles. Those rulemakings include: Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California; Proposed Rule, 62 FR 42159, August 5, 1997 (referred to as the "proposed CTR"); Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants, 57 FR 60848, December 22, 1992 (referred to as the "National Toxics Rule" or "NTR"); and the NTR as amended by Administrative Stay of Federal Water Quality Criteria for Metals and Interim Final Rule, Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants; States' Compliance—Revision of Metals Criteria, 60 FR 22228, May 4, 1995 (referred to as the "National Toxics Rule [NTR], as amended"). The NTR, as amended, is codified at 40 CFR 131.36. A copy of the proposed CTR and its preamble, and the NTR, as amended, and its preambles are contained in the administrative record for this rulemaking.

EPA is making this final rule effective upon publication. Under the Administrative Procedure Act, 5 U.S.C. 553(d)(3), agencies must generally publish a rule no more than 30 days prior to the effective date of the rule except as otherwise provided for by the Agency for good cause. The purpose of the 30-day waiting period is to give affected parties a reasonable time to adjust their behavior before the final rule takes effect. See *Omnipoint Corp.* v. *F.C.C.*, 78 F.3d 620, 630–631 (D.C. Cir. 1996); *Riverbend Farms, Inc.* v. *Madigan*, 958 F.2d 1479, 1485 (9th Cir. 1992).

In this instance, EPA finds good cause to make the final rule effective upon publication. In order to find good cause, an Agency needs to find that the 30-day period would be: (1) Impracticable, (2) unnecessary, or (3) contrary to the public interest. Here EPA is relying on the second reason to support its finding of good cause. EPA also notes that the State has requested EPA to make the rule immediately effective.

EPA finds that in this instance, waiting 30 days to make the rule effective is unnecessary. As explained in further detail elsewhere in this preamble, this rule is not self implementing; rather it establishes ambient conditions that the State of California will implement in future permit proceedings. These permit proceedings will, by regulation, take longer than 30 days to complete. This means that although the rule is immediately effective, no discharger's conduct would be altered under the rule in less than 30 days, and therefore the 30-day period is unnecessary.

2. Overview

This final rule establishes ambient water quality criteria for priority toxic pollutants in the State of California. The criteria in this final rule will supplement the water quality criteria promulgated for California in the NTR, as amended. In 1991, EPA approved a number of water quality criteria (discussed in section D), for the State of California. Since EPA had approved these criteria, it was not necessary to include them in the 1992 NTR for these criteria. However, the EPA-approved criteria were subsequently invalidated in State litigation. Thus, this final rule contains criteria to fill the gap created by the State litigation.

This final rule does not change or supersede any criteria previously promulgated for the State of California in the NTR, as amended. Criteria which EPA promulgated for California in the NTR, as amended, are footnoted in the final table at 131.38(b)(1), so that readers may see the criteria promulgated in the NTR, as amended, for California and the criteria promulgated through this rulemaking for California in the same table. This final rule is not intended to apply to waters within Indian Country. EPA recognizes that there are possibly waters located wholly or partly in Indian Country that are included in the State's basin plans. EPA will work with the State and Tribes to identify any such waters and determine whether further action to protect water quality in Indian Country is necessary.

This rule is important for several environmental, programmatic and legal reasons. Control of toxic pollutants in surface waters is necessary to achieve the CWA's goals and objectives. Many of California's monitored river miles, lake acres, and estuarine waters have elevated levels of toxic pollutants. Recent studies on California water bodies indicate that elevated levels of toxic pollutants exist in fish tissue which result in fishing advisories or bans. These toxic pollutants can be attributed to, among other sources, industrial and municipal discharges.

Water quality standards for toxic pollutants are important to State and EPA efforts to address water quality problems. Clearly established water quality goals enhance the effectiveness of many of the State's and EPA's water programs including permitting, coastal water quality improvement, fish tissue quality protection, nonpoint source controls, drinking water quality protection, and ecological protection. Numeric criteria for toxic pollutants allow the State and EPA to evaluate the adequacy of existing and potential control measures to protect aquatic ecosystems and human health. Numeric criteria also provide a more precise basis for deriving water quality-based effluent limitations (WQBELs) in

National Pollutant Discharge Elimination System (NPDES) permits and wasteload allocations for total maximum daily loads (TMDLs) to control toxic pollutant discharges. Congress recognized these issues when it enacted section 303(c)(2)(B) to the CWA.

While California recognizes the need for applicable water quality standards for toxic pollutants, its adoption efforts have been stymied by a variety of factors. The Administrator has decided to exercise her CWA authorities to move forward the toxic control program, consistent with the CWA and with the State of California's water quality standards program.

Today's action will also help restore equity among the States. The CWA is designed to ensure all waters are sufficiently clean to protect public health and/or the environment. The CWA allows some flexibility and differences among States in their adopted and approved water quality standards, but it should be implemented in a manner that ensures a level playing field among States. Although California has made important progress toward satisfying CWA requirements, it has not satisfied CWA section 303(c)(2)(B) by adopting numeric water quality criteria for toxic pollutants. This section was added to the CWA by Congress in 1987. Prior to today, the State of California had been the only State in the Nation for which CWA section 303(c)(2)(B) had remained substantially unimplemented after EPA's promulgation of the NTR in December of 1992. Section 303(c)(4) of the CWA authorizes the EPA Administrator to promulgate standards where necessary to meet the requirements of the Act. The Administrator determined that this rule was a necessary and important component for the implementation of CWA section 303(c)(2)(B) in California.

EPA acknowledges that the State of California is working to satisfy CWA section 303(c)(2)(B). When the State formally adopts, and EPA approves, criteria consistent with statutory requirements, as envisioned by Congress in the CWA, EPA intends to stay this rule. If within the applicable time frame for judicial review, the States' standards are challenged, EPA will withdraw this rule after such judicial review is complete and the State standards are sustained.

C. Statutory and Regulatory Background

The preamble to the August 5, 1997, proposed rule provided a general discussion of EPA's statutory and regulatory authority to promulgate water quality criteria for the State of California. See 62 FR 42160–42163. EPA is including that discussion in the record for the final rule. Commenters questioned EPA's authority to promulgate certain aspects of the proposal. EPA is responding to those comments in the appropriate sections of this preamble, and in the response to comments document included in the administrative record for this rulemaking. Where appropriate, EPA's responses expand upon the discussion of statutory and regulatory authority found in the proposal.

D. California Water Quality Standards Actions

1. California Regional Water Quality Control Board Basin Plans, and the Inland Surface Waters Plan (ISWP) and the Enclosed Bays and Estuaries Plan (EBEP) of April 1991

The State of California regulates water quality through its State Water Resources Control Board (SWRCB) and through nine Regional Water Quality Control Boards (RWQCBs). Each of the nine RWQCBs represents a different geographic area; area boundaries are generally along watershed boundaries. Each RWQCB maintains a Basin Plan which contains the designated uses of the water bodies within its respective geographic area within California. These designated uses (or "beneficial uses" under State law) together with legally-adopted criteria (or "objectives" under State law), comprise water quality standards for the water bodies within each of the Basin areas. Each of the nine RWQCBs undergoes a triennial basin planning review process, in compliance with CWA section 303. The SWRCB provides assistance to the RWQCBs.

Most of the Basin Plans contain conventional pollutant objectives such as dissolved oxygen. None of the Basin Plans contains a comprehensive list of priority toxic pollutant criteria to satisfy CWA section 303(c)(2)(B). The nine RWQCBs and the SWRCB had intended that the priority toxic pollutant criteria contained in the three SWRCB statewide plans, the Inland Surface Waters Plan (ISWP), the Enclosed Bays and Estuaries Plan (EBEP), and the Ocean Plan, apply to all basins and satisfy CWA section 303(c)(2)(B).

On April 11, 1991, the SWRCB adopted two statewide water quality control plans, the ISWP and the EBEP. These statewide plans contained narrative and numeric water quality criteria for toxic pollutants, in part to satisfy CWA section 303(c)(2)(B). The water quality criteria contained in the SWRCB statewide plans, together with the designated uses in each of the Basin Plans, created a set of water quality standards for waters within the State of California.

Specifically, the two plans established water quality criteria or objectives for all fresh waters, bays and estuaries in the State. The plans contained water quality criteria for some priority toxic pollutants, provisions relating to whole effluent toxicity, implementation procedures for point and nonpoint sources, and authorizing compliance schedule provisions. The plans also included special provisions affecting waters dominated by reclaimed water (labeled as Category (a) waters), and waters dominated by agricultural drainage and constructed agricultural drains (labeled as Category (b) and (c) waters, respectively).

2. EPA's Review of California Water Quality Standards for Priority Toxic Pollutants in the ISWP and EBEP, and the National Toxics Rule

The EPA Administrator has delegated the responsibility and authority for review and approval or disapproval of all new or revised State water quality standards to the EPA Regional Administrators (see 40 CFR 131.21). Thus, State actions under CWA section 303(c)(2)(B) are submitted to the appropriate EPA Regional Administrator for review and approval.

In mid-April 1991, the SWRCB submitted to EPA for review and approval the two statewide water quality control plans, the ISWP and the EBEP. On November 6, 1991, EPA Region 9 formally concluded its review of the SWRCB's plans. EPA approved the narrative water quality criterion and the toxicity criterion in each of the plans. EPA also approved the numeric water quality criteria contained in both plans, finding them to be consistent with the requirements of section 303(c)(2)(B) of the CWA and with EPA's national criteria guidance published pursuant to section 304(a) of the CWA.

EPA noted the lack of criteria for some pollutants, and found that, because of the omissions, the plans did not fully satisfy CWA section 303(c)(2)(B). The plans did not contain criteria for all listed pollutants for which EPA had published national criteria guidance. The ISWP contained human health criteria for only 65 pollutants, and the EBEP contained human health criteria for only 61 pollutants for which EPA had issued section 304(a) guidance criteria. Both the ISWP and EBEP contained aquatic life criteria for all pollutants except cyanide and chromium III (freshwater only) for which EPA has CWA section

304(a) criteria guidance. The SWRCB's administrative record stated that all priority pollutants with EPA criteria guidance were likely to be present in California waters. However, the SWRCB's record contained insufficient information to support a finding that the excluded pollutants were not reasonably expected to interfere with designated uses of the waters of the State.

Although EPA approved the statewide selenium objective in the ISWP and EBEP, EPA disapproved the objective for the San Francisco Bay and Delta, because there was clear evidence that the objective would not protect the designated fish and wildlife uses (the California Department of Health Services had issued waterfowl consumption advisories due to selenium concentrations, and scientific studies had documented selenium toxicity to fish and wildlife). EPA restated its commitment to object to National Pollutant Discharge Elimination System (NPDES) permits issued for San Francisco Bay that contained effluent limits based on an objective greater than 5 parts per billion (ppb) (four day average) and 20 ppb (1 hour average), the freshwater criteria. EPA reaffirmed its disapproval of Californias' site-specific selenium objective for portions of the San Joaquin River, Salt Slough, and Mud Slough. EPA also disapproved of the categorical deferrals and exemptions. These disapprovals included the disapproval of the State's deferral of water quality objectives to effluent dominated streams (Category a) and to streams dominated by agricultural drainage (Category b), and the disapproval of the exemption of water quality objectives to constructed agricultural drains (Category c). EPA found the definitions of the categories imprecise and overly broad which could have led to an incorrect interpretation.

Since EPA had disapproved portions of each of the California statewide plans which were necessary to satisfy CWA section 303(c)(2)(B), certain disapproved aspects of California's water quality standards were included in EPA's promulgation of the National Toxics Rule (NTR) (40 CFR 131.36, 57 FR 60848). EPA promulgated specific criteria for certain water bodies in California.

The NTR was amended, effective April 14, 1995, to stay certain metals criteria which had been promulgated as total recoverable. Effective April 15, 1995, EPA promulgated interim final metals criteria as dissolved concentrations for those metals which had been stayed (Administrative Stay of Federal Water Quality Criteria for Metals and Interim Final Rule, Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants; States' Compliance—Revision of Metals Criteria; 60 FR 22228, 22229, May 4, 1995 [the NTR, as amended]). The stay was in response to a lawsuit against EPA challenging, among other issues, metals criteria expressed as total recoverable concentrations. A partial Settlement Agreement required EPA to stay specific metals criteria in the NTR. EPA then promulgated certain metals criteria in the dissolved form through the use of conversion factors. These factors are listed in the NTR, as amended. A scientific discussion of these criteria is found in a subsequent section of this preamble.

Since certain criteria have already been promulgated for specific water bodies in the State of California in the NTR, as amended, they are not within the scope of today's final rule. However, for clarity in reading a comprehensive rule for the State of California, these criteria are incorporated into 40 CFR 131.38(d)(2). Footnotes to the Table in 40 CFR 131.38(b)(1) and 40 CFR 131.38(d)(3) clarify which criteria (and for which specific water bodies) were promulgated by the NTR, as amended, and are therefore excluded from this final rule. The appropriate (freshwater or saltwater) aquatic life criteria which were promulgated in the NTR, as amended, for all inland surface waters and enclosed bays and estuaries include: chromium III and cyanide. The appropriate (water and organism or organism only) human health criteria which were promulgated in the NTR, as amended, for all inland surface waters and enclosed bays and estuaries include:

antimony
thallium
asbestos
acrolein
acrylonitrile
carbon tetrachloride
chlorobenzene
1,2-dichloroethane
1,1-dichloroethylene
1,3-dichloropropylene
ethylbenzene
1,1,2,2-tetrachloroethane
tetrachloroethylene
1,1,2-trichloroethane
trichloroethylene
vinyl chloride
2,4-dichlorophenol
2-methyl-4,6-dinitrophenol
2,4-dinitrophenol
benzidine
bis(2-chloroethyl)ether
bis(2-ethylhexyl)phthalate
3,3-dichlorobenzidine
diethyl phthalate
dimethyl phthalate
di-n-butyl phthalate
2,4-dinitrotoluene
1,2-diphenylhydrazine
hexachlorobutadiene
hexachlorocyclopentadiene
hexachloroethane
isophorone
nitrobenzene
n-nitrosodimethylamine
n-nitrosodiphenylamine

Other pollutant criteria were promulgated in the NTR, as amended, for specific water bodies, but not all inland surface waters and enclosed bays and estuaries.

3. Status of Implementation of CWA Section 303(c)(2)(B)

Shortly after the SWRCB adopted the ISWP and EBEP, several dischargers filed suit against the State alleging that it had not adopted the two plans in compliance with State law. The plaintiffs in a consolidated case included: the County of Sacramento, Sacramento County Water Agency; Sacramento Regional County Sanitation District; the City of Sacramento; the City of Sunnyvale; the City of San Jose; the City of Stockton; and Simpson Paper Company.

The dischargers alleged that the State had not adopted the ISWP and EBEP in compliance with the California Administrative Procedures Act (Gov Code. Section 11340, *et seq.*), the California Environmental Quality Act (Pub. Re Code, Section 21000, *et seq.*), and the Porter-Cologne Act (Wat. Code, Section 13200, *et seq.*). The allegation that the State did not sufficiently consider economics when adopting water quality objectives, as allegedly required by Section 13241 of the Porter Cologne Act, was an important issue in the litigation.

In October of 1993, the Superior Court of California, County of Sacramento, issued a tentative decision in favor of the dischargers. In March of 1994, the Court issued a substantively similar final decision in favor of the dischargers. Final judgments from the Court in July of 1994 ordered the SWRCB to rescind the ISWP and EBEP. On September 22, 1994, the SWRCB formally rescinded the two statewide water quality control plans. The State is currently in the process of readopting water quality control plans for inland surface waters, enclosed bays and estuaries.

CWA section 303(c)(2)(B) was fully implemented in the State of California from December of 1992, when the NTR was promulgated, until September of 1994, when the SWRCB was required to rescind the ISWP and EBEP. The provisions for California in EPA's NTR together with the approved portions of

California's ISWP and EBEP implemented the requirements of CWA section 303(c)(2)(B). However, since September of 1994, when the SWRCB rescinded the ISWP and EBEP, the requirements of section 303(c)(2)(B) have not been fully implemented in California.

The scope of today's rule is to re-establish criteria for the remaining priority toxic pollutants to meet the requirements of section 303(c)(2)(B) of the CWA. Pursuant to section 303(c)(4), the Administrator has determined that it is necessary to include in today's action criteria for priority toxic pollutants, which are not covered by the NTR, as amended, or by the State through EPA-approved site-specific criteria, for waters of the United States in the State of California.

4. State-Adopted, Site-Specific Criteria for Priority Toxic Pollutants

The State has the discretion to develop site-specific criteria when appropriate e.g., when statewide criteria appear over-or under-protective of designated uses. Periodically, the State through its RWQCBs will adopt site-specific criteria for priority toxic pollutants within respective Basin Plans. These criteria are intended to be effective throughout the Basin or throughout a designated water body. Under California law, these criteria must be publicly reviewed and approved by the RWQCB, the SWRCB, and the State's Office of Administrative Law (OAL). Once this adoption process is complete, the criteria become State law.

These criteria must be submitted to the EPA Regional Administrator for review and approval under CWA section 303. These criteria are usually submitted to EPA as part of a RWQCB Basin Plan Amendment, after the Amendment has been adopted under the State's process and has become State law.

a. State-Adopted Site-Specific Criteria Under EPA Review

The State of California has recently reviewed and updated all of its RWQCB Basin Plans. All of the Basin Plans have completed the State review and adoption process and have been submitted to EPA for review and approval. Some of the Basin Plans contain site-specific criteria. In these cases, the State-adopted site-specific criteria are used for water quality programs.

EPA has not yet concluded consultation under the Endangered Species Act with the U.S. Department of Interior, Fish and Wildlife Service, and the U.S. Department of Commerce, National Marine Fisheries Service, on EPA's tentative approval/disapproval actions on the RWQCB Basin Plans. In this situation, the more stringent of the two criteria (the State-adopted site-specific criteria in the RWQCB Basin Plans, or the Federal criteria in this final rule), would be used for water quality programs including the calculation of water quality-based effluent criteria in National Pollutant Discharge Elimination System (NPDES) permits.

b. State-Adopted Site-Specific Criteria With EPA Approval

In several cases, the EPA Regional Administrator has already reviewed and approved State-adopted site-specific criteria within the State of California. Several of these cases are discussed in this section. All of the EPA approval letters referenced in today's preamble are contained in the administrative record for today's rule.

Sacramento River: EPA has approved site-specific acute criteria for copper, cadmium and zinc in the Sacramento River, upstream of Hamilton City, in the Central Valley Region (RWQCB for the Central Valley Region) of the State of California. EPA approved these site-specific criteria by letter dated August 7, 1985. Specifically, EPA approved for the Sacramento River (and tributaries) above Hamilton City, a copper criterion of 5.6 µg/l (maximum), a zinc criterion of 16 µg/l (maximum) and a cadmium criterion of 0.22 µg/l (maximum), all in the dissolved form using a hardness of 40 mg/l as CaCO3. (These criteria were actually adopted by the State and approved by EPA as equations which vary with hardness.) These "maximum" criteria correspond to acute criteria in today's final rule. Therefore, Federal acute criteria for copper, cadmium, and zinc for the Sacramento River (and tributaries) above Hamilton City are not necessary to protect the designated uses and are not included in the final rule. However, the EPA Administrator is making a finding that it is necessary to include chronic criteria for copper, cadmium and zinc for the Sacramento River (and tributaries) above Hamilton City, as part of the statewide criteria promulgated in today's final rule.

San Joaquin River: The selenium criteria in this rule are not applicable to portions of the San Joaquin River, in the Central Valley Region, because selenium criteria have been either previously approved by EPA or previously promulgated by EPA as part of the NTR. EPA approved and disapproved State-adopted site-specific selenium criteria in portions of the San Joaquin River, in the Central Valley Region of the State of California (RWQCB for the Central Valley Region). EPA's determination on these site-specific criteria is contained in a letter dated April 13, 1990.

Specifically, EPA approved for the San Joaquin River, mouth of Merced River to Vernalis, an aquatic life selenium criterion of 12 µg/l (maximum with the understanding that the instantaneous maximum concentration may not exceed the objective more than once every three years). Today's final rule does not affect this Federally-approved, State-adopted site-specific acute criterion, and it remains in effect for the San Joaquin River, mouth of Merced River to Vernalis. Therefore, an acute criterion for selenium in the San Joaquin River, mouth of Merced River to Vernalis is not necessary to protect the designated use and thus is not included in this final rule.

By letter dated April 13, 1990, EPA also approved for the San Joaquin River, mouth of Merced River to Vernalis, a State-adopted site-specific aquatic life selenium criterion of 5 µg/l (monthly mean); however, EPA disapproved a State-adopted site-specific selenium criterion of 8 µg/l (monthly mean—critical year only) for these waters. Subsequently, EPA promulgated a chronic selenium criterion of 5 µg/l (4 day average) for waters of the San Joaquin River from the mouth of the Merced River to Vernalis in the NTR. This chronic criterion applies to all water quality programs concerning the San Joaquin River, mouth of Merced River to Vernalis. Today's final rule does not affect the Federally-promulgated chronic selenium criterion of 5 µg/l (4 day average) set forth in the NTR. This previously Federally-promulgated criterion remains in effect for the San Joaquin River, mouth of Merced River to Vernalis.

Grassland Water District, San Luis National Wildlife Refuge, and Los Banos State Wildlife Refuge: EPA approved for the Grassland Water District, San Luis National Wildlife Refuge, and Los Banos State Wildlife Refuge, a State-adopted site-specific aquatic life selenium criterion of 2 µg/l (monthly mean) by letter dated April 13, 1990. This Federally-approved, State-adopted site-specific chronic criterion remains in effect for the Grassland Water District, San Luis National Wildlife Refuge and Los Banos State Wildlife Refuge. Therefore it is not necessary to include in today's final rule, a chronic criterion for selenium for the Grassland Water District, San Luis National Wildlife Refuge and Los Banos State Wildlife Refuge, and thus, it is not included in this final rule.

San Francisco Regional Board Basin Plan of 1986: EPA approved several priority toxic pollutant objectives (CWA criteria) that were contained in the1986 San Francisco Regional Board Basin Plan, as amended by SWRCB Resolution Numbers 87–49, 87–82 and 87–92, by letters dated September 2, 1987 and December 24, 1987. This Basin Plan, the SWRCB Resolutions, and the EPA approval letters are contained in the administrative record for this rulemaking. It is not necessary to include these criteria for priority toxic pollutants that are contained in the San Francisco Regional Board's 1986 Basin Plan as amended, and approved by EPA. Priority pollutants in this situation are footnoted in the matrix at 131.38(b)(1) with footnote "b." Where gaps exist in the State adoption and EPA approval of priority toxic pollutant objectives, the criteria in today's rule apply.

EPA is assigning "human health, water and organism consumption" criteria to waters with the States' municipal or "MUN" beneficial use designation in the Basin Plan. Also, some pollutants regulated through the Basin Plan have different averaging periods, *e.g.,* one hour as compared with the rule's "short-term." However, where classes of chemicals, such as polynuclear aromatic hydrocarbons, or PAHs, and phenols, are regulated through the Basin Plan, but not specific chemicals within the category, specific chemicals within the category are regulated by today's rule.

E. Rationale and Approach for Developing the Final Rule

This section explains EPA's legal basis for today's final rule, and discusses EPA's general approach for developing the specific requirements for the State of California.

1. Legal Basis

CWA section 303(c) specifies that adoption of water quality standards is primarily the responsibility of the States. However, CWA section 303(c) also describes a role for the Federal government to oversee State actions to ensure compliance with CWA requirements. If EPA's review of the States' standards finds flaws or omissions, then the CWA authorizes EPA to correct the deficiencies (see CWA section 303(c)(4)). This water quality standards promulgation authority has been used by EPA to issue final rules on several separate occasions, including the NTR, as amended, which promulgated criteria similar to those included here for a number of States. These actions have addressed both insufficiently protective State criteria and/or designated uses and failure to adopt needed criteria. Thus, today's action is not unique.

The CWA in section 303(c)(4) provides two bases for promulgation of Federal water quality standards. The first basis, in paragraph (A), applies when a State submits new or revised standards that EPA determines are not consistent with the applicable requirements of the CWA. If, after EPA's disapproval, the State does not amend its rules so as to be consistent with the CWA, EPA is to promptly propose appropriate Federal water quality standards for that State. The second basis for an EPA action is in paragraph (B), which provides that EPA shall promptly initiate promulgation "* * * in any case where the Administrator determines that a revised or new standard is necessary to meet the requirements of this Act." EPA is using section 303(c)(4)(B) as the legal basis for today's final rule.

As discussed in the preamble to the NTR, the Administrator's determination under CWA section 303(c)(4) that criteria are necessary to meet the requirements of the Act could be supported in several ways. Consistent with EPA's approach in the NTR, EPA interprets section 303(c)(2)(B) of the CWA to allow EPA to act where the State has not succeeded in establishing numeric water quality standards for toxic pollutants. This inaction can be the basis for the Administrator's determination under section 303(c)(4) that new or revised criteria are necessary to ensure designated uses are protected.

EPA does not believe that it is necessary to support the criteria in today's rule on a pollutant-specific, water body-by-water-body basis. For EPA to undertake an effort to conduct research and studies of each stream segment or water body across the State of California to demonstrate that for each toxic pollutant for which EPA has issued CWA section 304(a) criteria guidance there is a "discharge or presence" of that pollutant which could reasonably "be expected to interfere with" the designated use would impose an enormous administrative burden and would be contrary to the statutory directive for swift action manifested by the 1987 addition of section 303(c)(2)(B) to the CWA. Moreover, because these criteria are ambient criteria that define attainment of the designated uses, their application to all water bodies will result in additional controls on dischargers only where necessary to protect the designated uses.

EPA's interpretation of section 303(c)(2)(B) is supported by the language of the provision, the statutory framework and purpose of section 303, and the legislative history. In adding section 303(c)(2)(B) to the CWA, Congress understood the existing requirements in section 303(c)(1) for States to conduct triennial reviews of their water quality standards and submit the results of those reviews to EPA and in section 303(c)(4)(B) for promulgation. CWA section 303(c) includes numerous deadlines and section 303(c)(4) directs the Administrator to act "promptly" where the Administrator determines that a revised or new standard is necessary to meet the requirements of the Act. Congress, by linking section 303(c)(2)(B) to the section 303(c)(1) three-year review period, gave States a last chance to correct this deficiency on their own. The legislative history of the provision demonstrates that chief Senate sponsors, including Senators Stafford, Chaffee and others wanted the provision to eliminate State and EPA delays and force quick action. Thus, to interpret CWA section 303(c)(2)(B) and (c)(4) to require such a cumbersome pollutant specific effort on each stream segment would essentially render section 303(c)(2)(B) meaningless. The provision and its legislative background indicate that the Administrator's determination to invoke section 303(c)(4)(B) authority can be met by the Administrator making a generic finding of inaction by the State without the need to develop pollutant specific data for individual stream segments. Finally, the reference in section 303(c)(2)(B) to section 304(a) criteria suggests that section 304(a) criteria serve as default criteria; that once EPA has issued them, States were to adopt numeric criteria for those pollutants based on the 304(a) criteria, unless they had other scientifically defensible criteria. EPA also notes that this rule follows the approach EPA took nationally in promulgating the NTR for States that failed to comply with CWA section 303(c)(2)(B). 57 FR 60848, December 22, 1992. EPA incorporates the discussion in the NTR preamble as part of this rulemaking record.

This determination is supported by information in the rulemaking record showing the discharge or presence of priority toxic pollutants throughout the State. While this data is not necessarily complete, it constitutes a strong record supporting the need for numeric criteria for priority toxic pollutants with section 304(a) criteria guidance where the State does not have numeric criteria.

Today's final rule would not impose any undue or inappropriate burden on the State of California or its dischargers. It merely puts in place numeric criteria

for toxic pollutants that are already used in other States in implementing CWA programs. Under this rulemaking, the State of California retains the ability to adopt alternative water quality criteria simply by completing its criteria adoption process. Upon EPA approval of those criteria, EPA will initiate action to stay the Federally-promulgated criteria and subsequently withdraw them.

2. Approach for Developing This Rule

In summary, EPA developed the criteria promulgated in today's final rule as follows. Where EPA promulgated criteria for California in the NTR, EPA has not acted to amend the criteria in the NTR. Where criteria for California were not included in the NTR, EPA used section 304(a) National criteria guidance documents as a starting point for the criteria promulgated in this rule. EPA then determined whether new information since the development of the national criteria guidance documents warranted any changes. New information came primarily from two sources. For human health criteria, new or revised risk reference doses and cancer potency factors on EPA's Integrated Risk Information System (IRIS) as of October 1996 form the basis for criteria values (see also 63 FR 68354). For aquatic life criteria, updated data sets resulting in revised criteria maximum concentrations (CMCs) and criteria continuous concentrations (CCCs) formed the basis for differences from the national criteria guidance documents. Both of these types of changes are discussed in more detail in the following sections. This revised information was used to develop the water quality criteria promulgated here for the State of California.

F. Derivation of Criteria

1. Section 304(a) Criteria Guidance Process

Under CWA section 304(a), EPA has developed methodologies and specific criteria guidance to protect aquatic life and human health. These methodologies are intended to provide protection for all surface waters on a national basis. The methodologies have been subject to public review, as have the individual criteria guidance documents. Additionally, the methodologies have been reviewed by EPA's Science Advisory Board (SAB) of external experts.

EPA has included in the record of this rule the aquatic life methodology as described in "Appendix B—Guidelines for Deriving Water Quality Criteria for the Protection of Aquatic Life and Its Uses" to the "Water Quality Criteria Documents; Availability" (45 FR 79341, November 28, 1980) as amended by the "Summary of Revisions to Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses" (50 FR 30792, July 29, 1985). (**Note:** Throughout the remainder of this preamble, this reference is described as the 1985 Guidelines. Any page number references are to the actual guidance document, not the notice of availability in the **Federal Register**. A copy of the 1985 Guidelines is available through the National Technical Information Service (PB85–227049), is in the administrative record for this rule, and is abstracted in Appendix A of *Quality Criteria for Water*, 1986.) EPA has also included in the administrative record of this rule the human health methodology as described in "Appendix C—Guidelines and Methodology Used in the Preparation of Health Effects Assessment Chapters of the Consent Decree Water Criteria Documents" (45 FR 79347, November 28, 1980). (Note: Throughout the remainder of this preamble, this reference is described as the Human Health Guidelines or the 1980 Guidelines.) EPA also recommends that the following be reviewed: "Appendix D—Response to Comments on Guidelines for Deriving Water Quality Criteria for the Protection of Aquatic Life and Its Uses," (45 FR 79357, November 28, 1980); "Appendix E—Responses to Public Comments on the Human Health Effects Methodology for Deriving Ambient Water Quality Criteria" (45 FR 79368, November 28, 1980); and "Appendix B—Response to Comments on Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses" (50 FR 30793, July 29, 1985). EPA placed into the administrative record for this rulemaking the most current individual criteria guidance for the priority toxic pollutants included in today's rule. (**Note:** All references to appendices are to the associated **Federal Register** publication.)

EPA received many comments related to the issue of what criteria should apply in the CTR if the CWA section 304(a) criteria guidance is undergoing re-evaluation, or if new data are developed that may affect a recommended criterion. As science is always evolving, EPA is faced with the challenge of promulgating criteria that reflect the best science and sound science. EPA addressed this challenge in some detail in its **Federal Register** notice that contained the Agency's current section 304(a) criteria guidance (63 FR 68335, December 10, 1998). There, EPA articulated its policy, reiterated here, that the existing criteria guidance represent the Agency's best assessment until such time as EPA's re-evaluation of a criteria guidance value for a particular chemical is complete. The reason for this is that both EPA's human health criteria guidance and aquatic life criteria guidance are developed taking into account numerous variables. For example, for human health criteria guidance, EPA evaluates many diverse toxicity studies, whose results feed into a reference dose or cancer potency estimate that, along with a number of exposure factors and determination of risk level, results in a guidance criterion. For aquatic life, EPA evaluates many diverse aquatic toxicity studies to determine chronic and acute toxicity taking into account how other factors (such as pH, temperature or hardness) affect toxicity. EPA also, to the extent possible, addresses bioaccumulation or bioconcentration. EPA then uses this toxicity information along with exposure information to determine the guidance criterion. Importantly, EPA subjects such evaluation to peer review and/or public comment.

For these reasons, EPA generally does not make a change to the 304(a) criteria guidance based on a partial picture of the evolving science. This makes sense, because to address one piece of new data without looking at all relevant data is less efficient and results in regulatory impacts that may go back and forth, when in the end, the criteria guidance value does not change that much. Certain new changes, however, do warrant change in criteria guidance, such as a change in a value in EPA's Integrated Risk Information System (IRIS) because it represents the Agency consensus about human health impacts. These changes are sufficiently examined across the Agency such that EPA believes they can be incorporated into EPA's water quality criteria guidance. EPA has followed this approach in the CTR. Included in the administrative record for today's rule is a document entitled "Status of Clean Water Act Section 304(a) Criteria" which further explains EPA's policy on managing change to criteria guidance.

2. Aquatic Life Criteria

Aquatic life criteria may be expressed in numeric or narrative form. EPA's 1985 Guidelines describe an objective, internally consistent and appropriate way of deriving chemical-specific, numeric water quality criteria for the protection of the presence of, as well as

the uses of, both fresh and salt water aquatic organisms.

An aquatic life criterion derived using EPA's CWA section 304(a) method "might be thought of as an estimate of the highest concentration of a substance in water which does not present a significant risk to the aquatic organisms in the water and their uses." (45 FR 79341.) EPA's guidelines are designed to derive criteria that protect aquatic communities. EPA's 1985 Guidelines attempt to provide a reasonable and adequate amount of protection with only a small possibility of substantial overprotection or underprotection. As discussed in detail below, there are several individual factors which may make the criteria somewhat overprotective or underprotective. The approach EPA is using is believed to be as well balanced as possible, given the state of the science.

Numerical aquatic life criteria derived using EPA's 1985 Guidelines are expressed as short-term and long-term averages, rather than one number, in order that the criterion more accurately reflect toxicological and practical realities. The combination of a criterion maximum concentration (CMC), a short-term concentration limit, and a criterion continuous concentration (CCC), a four-day average concentration limit, are designed to provide protection of aquatic life and its uses from acute and chronic toxicity to animals and plants, without being as restrictive as a one-number criterion would have to be (1985 Guidelines, pages 4 & 5). The terms CMC and CCC are the formal names for the two (acute and chronic) values of a criterion for a pollutant; however, this document will also use the informal synonyms acute criterion and chronic criterion.

The two-number criteria are intended to identify average pollutant concentrations which will produce water quality generally suited to maintenance of aquatic life and designated uses while restricting the duration of excursions over the average so that total exposures will not cause unacceptable adverse effects. Merely specifying an average value over a time period may be insufficient unless the time period is short, because excursions higher than the average may kill or cause substantial damage in short periods.

A minimum data set of eight specified families is recommended for criteria development (details are given in the 1985 Guidelines, page 22). The eight specific families are intended to be representative of a wide spectrum of aquatic life. For this reason it is not necessary that the specific organisms tested be actually present in the water body. EPA's application of its guidelines to develop the criteria matrix in this rule is judged by the Agency to be appropriate for all waters of the United States (U.S.), and to all ecosystems (1985 Guidelines, page 4) including those waters of the U.S. and ecosystems in the State of California.

Fresh water and salt water (including both estuarine and marine waters) have different chemical compositions, and freshwater and saltwater species often do not inhabit the same water. To provide additional accuracy, criteria are developed for fresh water and for salt water.

For this rule, EPA updated freshwater aquatic life criteria contained in CWA section 304(a) criteria guidance first published in the early 1980's and later modified in the NTR, as amended, for the following ten pollutants: arsenic, cadmium, chromium (VI), copper, dieldrin, endrin, lindane (gamma BHC), nickel, pentachlorophenol, and zinc. The updates used as the basis for this rule are explained in a technical support document entitled, *1995 Updates: Water Quality Criteria Documents for the Protection of Aquatic Life in Ambient Water* (U.S. EPA–820–B–96–001, September 1996), available in the administrative record to this rulemaking; this document presents the derivation of each of the final CMCs and CCCs and the toxicity studies from which the updated freshwater criteria for the ten pollutants were derived.

The polychlorinated biphenyls (PCB) criteria in the criteria matrix for this rule differs from that in the NTR, as amended; for this rule, the criteria are expressed as the sum of seven aroclors, while for the NTR, as amended, the criteria are expressed for each of seven aroclors. The aquatic life criteria for PCBs in the CTR are based on the criteria contained in the 1980 criteria guidance document for PCBs which is included in the administrative record for this rule. This criteria document explains the derivation of aquatic life criteria based on total PCBs. For more information see the Response to Comments document for this rule. Today's chronic aquatic life criteria for PCBs are based on a final residue value (FRV). In EPA's guidelines for deriving aquatic life criteria, an FRV-based criterion is intended to prevent concentrations of pollutants in commercially or recreationally important aquatic species from affecting the marketability of those species or affecting the wildlife that consume aquatic life.

The proposed CTR included an updated freshwater and saltwater aquatic life criteria for mercury. In today's final rule, EPA has reserved the mercury criteria for freshwater and saltwater aquatic life, but is promulgating human health criteria for mercury for all surface waters in California. In some instances, the human health mercury criteria included in today's final rule may not protect some aquatic species or threatened or endangered species. In such instances, more stringent mercury limits may be determined and implemented through use of the State's narrative criterion. The reasons for reserving the mercury aquatic life numbers are explained in further detail in Section L, Endangered Species Act.

a. Freshwater Acute Selenium Criterion

EPA proposed a different freshwater acute aquatic life criterion for selenium for this rule than was promulgated in the NTR, as amended. EPA's proposed action was consistent with EPA's proposed selenium criterion maximum concentration for the Water Quality Guidance for the Great Lakes System (61 FR 58444, November 14, 1996). This proposal took into account data showing that selenium's two most prevalent oxidation states, selenite and selenate, present differing potentials for aquatic toxicity, as well as new data which indicated that various forms of selenium are additive. Additivity increases the toxicity of mixtures of different forms of the pollutant. The proposed approach produces a different selenium acute criterion concentration, or CMC, depending upon the relative proportions of selenite, selenate, and other forms of selenium that are present.

The preamble to the August 5, 1997, proposed rule provided a lengthy discussion of this proposed criterion for the State of California. See 62 FR 42160–42208. EPA incorporates that discussion here as part of this rulemaking record. In 1996, a similar discussion was included in the proposed rule for the Great Lakes System. Commenters questioned several aspects of the Great Lakes proposal. EPA is continuing to respond to those comments, and to follow up with additional literature review and toxicity testing. In addition, the U.S. FWS and U.S. NMFS (collectively, the Services) are concerned that EPA's proposed criterion may not be sufficiently protective of certain threatened and endangered species in California. Because the Services believe there is a lack of data to show for certain that the proposed criterion would not affect threatened and endangered species, the Services prefer that EPA further investigate the protectiveness of the

criterion before finalizing the proposed criterion. Therefore, EPA is not promulgating a final acute freshwater selenium criterion at this time.

b. Dissolved Metals Criteria

In December of 1992, in the NTR, EPA promulgated water quality criteria for several States that had failed to meet the requirements of CWA section 303(c)(2)(B). Included among the water quality criteria promulgated were numeric criteria for the protection of aquatic life for 11 metals: arsenic, cadmium, chromium (III), chromium (VI), copper, lead, mercury, nickel, selenium, silver and zinc. Criteria for two metals applied to the State of California: chromium III and selenium.

The Agency received extensive public comment during the development of the NTR regarding the most appropriate approach for expressing the aquatic life metals criteria. The principal issue was the correlation between metals that are measured and metals that are bioavailable and toxic to aquatic life. It is now the Agency's policy that the use of dissolved metal to set and measure compliance with aquatic life water quality standards is the recommended approach, because dissolved metal more closely approximates the bioavailable fraction of the metal in the water column than does total recoverable metal.

Since EPA's previous aquatic life criteria guidance had been expressed as total recoverable metal, to express the criteria as dissolved, conversion factors were developed to account for the possible presence of particulate metal in the laboratory toxicity tests used to develop the total recoverable criteria. EPA included a set of recommended freshwater conversion factors with its Metals Policy (see Office of Water Policy and Technical Guidance on Interpretation and Implementation of Aquatic Life Metals Criteria, Martha G. Prothro, Acting Assistant Administrator for Water, October 1, 1993). Based on additional laboratory evaluations that simulated the original toxicity tests, EPA refined the procedures used to develop freshwater conversion factors for aquatic life criteria. These new conversion factors were made available for public review and comment in the amendments to the NTR on May 4, 1995, at 60 FR 22229. They are also contained in today's rule at 40 CFR 131.38(b)(2).

The preamble to the August 5, 1997, proposed rule provided a more detailed discussion of EPA's metals policy concerning the aquatic life water quality criteria for the State of California. See 62 FR 42160–42208. EPA incorporates that discussion here as part of this rulemaking record. Many commenters strongly supported the Agency's policy on dissolved metals aquatic life criteria. A few commenters expressed an opinion that the metals policy may not provide criteria that are adequately protective of aquatic or other species. Responses to those comments are contained in a memo to the CTR record entitled "Discussion of the Use of Dissolved Metals in the CTR" (February 1, 2000, Jeanette Wiltse) and EPA's response to comments document which are both contained in the administrative record for the final rule.

Calculation of Aquatic Life Dissolved Metals Criteria: Metals criteria values for aquatic life in today's rule in the matrix at 131.38(b)(1) are shown as dissolved metal. These criteria have been calculated in one of two ways. For freshwater metals criteria that are hardness-dependent, the metals criteria value is calculated separately for each hardness using the table at 40 CFR 131.38(b)(2). (The hardness-dependent freshwater values presented in the matrix at 40 CFR 131.38(b)(1) have been calculated using a hardness of 100 mg/l as CaCO3 for illustrative purposes only.) The hardness-dependent criteria are then multiplied by the appropriate conversion factors in the table at 40 CFR 131.38(b)(2). Saltwater and freshwater metals criteria that are not hardness-dependent are calculated by taking the total recoverable criteria values (from EPA's national section 304(a) criteria guidance, as updated and described in section F.2.a.) before rounding, and multiplying them by the appropriate conversion factors. The final dissolved metals criteria values, as they appear in the matrix at 40 CFR 131.38(b)(1), are rounded to two significant figures.

Translators for Dissolved to Total Recoverable Metals Limits: EPA's National Pollutant Discharge Elimination System (NPDES) regulations require that limits for metals in permits be stated as total recoverable in most cases (see 40 CFR 122.45(c)) except when an effluent guideline specifies the limitation in another form of the metal, the approved analytical methods measure only dissolved metal, or the permit writer expresses a metal's limit in another form (*e.g.*, dissolved, specific valence, or total) when required to carry out provisions of the CWA. This is because the chemical conditions in ambient waters frequently differ substantially from those in the effluent and these differences result in changes in the partitioning between dissolved and absorbed forms of the metal. This means that if effluent limits were expressed in the dissolved form, additional particulate metal could dissolve in the receiving water causing the criteria to be exceeded. Expressing criteria as dissolved metal requires translation between different metal forms in the calculation of the permit limit so that a total recoverable permit limit can be established that will achieve water quality standards. Thus, it is important that permitting authorities and other authorities have the ability to translate between dissolved metal in ambient waters and total recoverable metal in effluent.

EPA has completed guidance on the use of translators to convert from dissolved metals criteria to total recoverable permit limits. The document, *The Metals Translator: Guidance for Calculating a Total Recoverable Permit Limit From a Dissolved Criterion* (EPA 823–B–96–007, June 1996), is included in the administrative record for today's rule. This technical guidance examines how to develop a metals translator which is defined as the fraction of total recoverable metal in the downstream water that is dissolved, *i.e.*, the dissolved metal concentration divided by the total recoverable metal concentration. A translator may take one of three forms: (1) It may be assumed to be equivalent to the criteria guidance conversion factors; (2) it may be developed directly as the ratio of dissolved to total recoverable metal; and (3) it may be developed through the use of a partition coefficient that is functionally related to the number of metal binding sites on the adsorbent in the water column (*e.g.*, concentrations of total suspended solids or TSS). This guidance document discusses these three forms of translators, as well as field study designs, data generation and analysis, and site-specific study plans to generate site-specific translators.

California Regional Water Quality Control Boards may use any of these methods in developing water quality-based permit limits to meet water quality standards based on dissolved metals criteria. EPA encourages the State to adopt a statewide policy on the use of translators so that the most appropriate method or methods are used consistently within California.

c. Application of Metals Criteria

In selecting an approach for implementing the metals criteria, the principal issue is the correlation between metals that are measured and metals that are biologically available and toxic. In order to assure that the metals criteria are appropriate for the chemical conditions under which they are applied, EPA is providing for the

adjustment of the criteria through application of the "water-effect ratio" procedure. EPA notes that performing the testing to use a site-specific water-effect ratio is optional on the part of the State.

In the NTR, as amended, EPA identified the water-effect ratio (WER) procedure as a method for optional site-specific criteria development for certain metals. The WER approach compares bioavailability and toxicity of a specific pollutant in receiving waters and in laboratory waters. A WER is an appropriate measure of the toxicity of a material obtained in a site water divided by the same measure of the toxicity of the same material obtained simultaneously in a laboratory dilution water.

On February 22, 1994, EPA issued *Interim Guidance on the Determination and Use of the Water-Effect Ratios for Metals* (EPA 823-B–94–001) now incorporated into the updated Second Edition of the Water Quality Standards Handbook, Appendix L. A copy of the Handbook is contained in the administrative record for today's rule. In accordance with the WER guidance and where application of the WER is deemed appropriate, EPA strongly encourages the application of the WER on a watershed or water body basis as part of a water quality criteria in California as opposed to the application on a discharger-by-discharger basis through individual NPDES permits. This approach is technically sound and an efficient use of resources. However, discharger specific WERs for individual NPDES permit limits are possible and potentially efficient where the NPDES discharger is the only point source discharger to a specific water body.

The rule requires a default WER value of 1.0 which will be assumed, if no site-specific WER is determined. To use a WER other than the default of 1.0, the rule requires that the WER must be determined as set forth in EPA's WER guidance or by another scientifically defensible method that has been adopted by the State as part of its water quality standards program and approved by EPA.

The WER is a more comprehensive mechanism for addressing bioavailability issues than simply expressing the criteria in terms of dissolved metal. Consequently, expressing the criteria in terms of dissolved metal, as done in today's rule for California, does not completely eliminate the utility of the WER. This is particularly true for copper, a metal that forms reduced-toxicity complexes with dissolved organic matter.

The *Interim Guidance on Determination and Use of Water-Effect Ratios for Metals* explains the relationship between WERs for dissolved criteria and WERs for total recoverable criteria. Dissolved measurements are to be used in the site-specific toxicity testing underlying the WERs for dissolved criteria. Because WERs for dissolved criteria generally are little affected by elevated particulate concentrations, EPA expects those WERs to be somewhat less than WERs for total recoverable criteria in such situations. Nevertheless, after the site-specific ratio of dissolved to total metal has been taken into account, EPA expects a permit limit derived using a WER for a dissolved criterion to be similar to the permit limit that would be derived from the WER for the corresponding total recoverable criterion.

d. Saltwater Copper Criteria

The saltwater copper criteria for aquatic life in today's rule are 4.8 μg/l (CMC) and 3.1 μg/l (CCC) in the dissolved form. These criteria reflect new data including data collected from studies for the New York/New Jersey Harbor and the San Francisco Bay indicating a need to revise the former copper 304(a) criteria guidance document to reflect a change in the saltwater CMC and CCC aquatic life values. These data also reflect a comprehensive literature search resulting in added toxicity test data for seven new species to the database for the saltwater copper criteria. EPA believes these new data have national implications and the national criteria guidance now contains a CMC of 4.8 μg/l dissolved and a CCC of 3.1 μg/l dissolved. In the amendments to the NTR, EPA noticed the availability of data to support these changes to the NTR, and solicited comments. The data can be found in the draft document entitled, *Ambient Water Quality Criteria—Copper, Addendum 1995.* This document is available from the Office of Water Resource Center and is available for review in the administrative record for today's rule.

e. Chronic Averaging Period

In establishing water quality criteria, EPA generally recommends an "averaging period" which reflects the duration of exposure required to elicit effects in individual organisms (TSD, Appendix D–2). The criteria continuous concentration, or CCC, is intended to be the highest concentration that could be maintained indefinitely in a water body without causing an unacceptable effect on the aquatic community or its uses (TSD, Appendix D–1). As aquatic organisms do not generally experience steady exposure, but rather fluctuating exposures to pollutants, and because aquatic organisms can generally tolerate higher concentrations of pollutants over a shorter periods of time, EPA expects that the concentration of a pollutant can exceed the CCC without causing an unacceptable effect if (a) the magnitude and duration of exceedences are appropriately limited and (b) there are compensating periods of time during which the concentration is below the CCC. This is done by specifying a duration of an "averaging period" over which the average concentration should not exceed the CCC more often than specified by the frequency (TSD, Appendix D–1).

EPA is promulgating a 4-day averaging period for chronic criteria, which means that measured or predicted ambient pollutant concentrations should be averaged over a 4-day period to determine attainment of chronic criteria. The State may apply to EPA for approval of an alternative averaging period. To do so, the State must submit to EPA the basis for such alternative averaging period.

The most important consideration for setting an appropriate averaging period is the length of time that sensitive organisms can tolerate exposure to a pollutant at levels exceeding a criterion without showing adverse effects on survival, growth, or reproduction. EPA believes that the chronic averaging period must be shorter than the duration of the chronic tests on which the CCC is based, since, in some cases, effects are elicited before exposure of the entire duration. Most of the toxicity tests used to establish the chronic criteria are conducted using steady exposure to toxicants for a least 28 days (TSD, page 35). Some chronic tests, however, are much shorter than this (TSD, Appendix D–2). EPA selected the 4-day averaging period based on the shortest duration in which chronic test effects are sometimes observed for certain species and toxicants. In addition, EPA believes that the results of some chronic tests are due to an acute effect on a sensitive life stage that occurs some time during the test, rather than being caused by long-term stress or long-term accumulation of the test material in the organisms.

Additional discussion of the rationale for the 4-day averaging period is contained in Appendix D of the TSD. Balancing all of the above factors and data, EPA believes that the 4-day averaging period falls within the scientifically reasonable range of values for choice of the averaging period, and is an appropriate length of time of

pollutant exposure to ensure protection of sensitive organisms.

EPA established a 4-day averaging period in the NTR. In settlement of litigation on the NTR, EPA stated that it was "in the midst of conducting, sponsoring, or planning research related to the basis for and application of" water quality criteria and mentioned the issue of averaging period. See Partial Settlement Agreement in *American Forest and Paper Ass'n, Inc. et al.* v. *U.S. EPA* (Consolidated Case No. 93–0694 (RMU), D.D.C.). EPA is re-evaluating issues raised about averaging periods and will, if appropriate, revise the 1985 Guidelines.

EPA received public comment relevant to the averaging period during the comment period for the 1995 Amendments to the NTR (60 FR 22228, May 4, 1995), although these public comments did not address the chronic averaging period separately from the allowable excursion frequency and the design flow. Comments recommended that EPA use the 30Q5 design flow for chronic criteria.

While EPA is undertaking analysis of the chronic design conditions as part of the revisions to the 1985 Guidelines, EPA has not yet completed this work. Until this work is complete, for the reasons set forth in the TSD, EPA continues to believe that the 4-day chronic averaging period represents a reasonable, defensible value for this parameter.

EPA added language to the final rule which will enable the State to adopt alternative averaging periods and frequencies and associated design flows where appropriate. The State may apply to EPA for approval of alternative averaging periods and frequencies and related design flows; the State must submit the bases for any changes. Before approving any change, EPA will publish for public comment, a notice proposing the changes.

f. Hardness

Freshwater aquatic life criteria for certain metals are expressed as a function of hardness because hardness and/or water quality characteristics that are usually correlated with hardness can reduce or increase the toxicities of some metals. Hardness is used as a surrogate for a number of water quality characteristics which affect the toxicity of metals in a variety of ways. Increasing hardness has the effect of decreasing the toxicity of metals. Water quality criteria to protect aquatic life may be calculated at different concentrations of hardnesses measured in milligrams per liter (mg/l) as calcium carbonate ($CaCO_3$).

Section 131.38(b)(2) of the final rule presents the hardness-dependent equations for freshwater metals criteria. For example, using the equation for zinc, the total recoverable CMCs at a hardness of 10, 50, 100 or 200 mg/l as $CaCO_3$ are 17, 67, 120 and 220 micrograms per liter (µg/l), respectively. Thus, the specific value in the table in the regulatory text is for illustrative purposes only. Most of the data used to develop these hardness equations for deriving aquatic life criteria for metals were in the range of 25 mg/l to 400 mg/l as $CaCO_3$, and the formulas are therefore most accurate in this range. The majority of surface waters nationwide and in California have a hardness of less than 400 mg/l as $CaCO_3$.

In the past, EPA generally recommended that 25 mg/l as $CaCO_3$ be used as a default hardness value in deriving freshwater aquatic life criteria for metals when the ambient (or actual) hardness value is below 25 mg/l as $CaCO_3$. However, use of the approach results in criteria that may not be fully protective. Therefore, for waters with a hardness of less than 25 mg/l as $CaCO_3$, criteria should be calculated using the actual ambient hardness of the surface water.

In the past, EPA generally recommended that if the hardness was over 400 mg/l, two options were available: (1) Calculate the criterion using a default WER of 1.0 and using a hardness of 400 mg/l in the hardness equation; or (2) calculate the criterion using a WER and the actual ambient hardness of the surface water in the equation. Use of the second option is expected to result in the level of protection intended in the 1985 Guidelines whereas use of the first option is thought to result in an even more protective aquatic life criterion. At high hardness there is an indication that hardness and related inorganic water quality characteristics do not have as much of an effect on toxicity of metals as they do at lower hardnesses. Related water quality characteristics do not correlate as well at higher hardnesses as they do at lower hardnesses. Therefore, if hardness is over 400 mg/l as $CaCO_3$, a hardness of 400 mg/l as $CaCO_3$ should be used with a default WER of 1.0; alternatively, the WER and actual hardness of the surface water may be used.

EPA requested comments in the NTR amendments on the use of actual ambient hardness for calculating criteria when the hardness is below 25 mg/l as $CaCO_3$, and when hardness is greater than 400 mg/l as $CaCO_3$. Most of the comments received were in favor of using the actual hardness with the use of the water-effect ratio (1.0 unless otherwise specified by the permitting authority) when the hardness is greater than 400 mg/l as $CaCO_3$. A few commenters did not want the water-effect ratio to be mandatory in calculating hardness, and other commenters had concerns about being responsible for deriving an appropriate water-effect ratio. Overall, the commenters were in favor of using the actual hardness when calculating hardness-dependent freshwater metals criteria for hardness between 0–400 mg/l as $CaCO_3$. EPA took those comments into account in promulgating today's rule.

A hardness equation is most accurate when the relationships between hardness and the other important inorganic constituents, notably alkalinity and pH, are nearly identical in all of the dilution waters used in the toxicity tests and in the surface waters to which the equation is to be applied. If an effluent raises hardness but not alkalinity and/or pH, using the hardness of the downstream water might provide a lower level of protection than intended by the 1985 guidelines. If it appears that an effluent causes hardness to be inconsistent with alkalinity and/or pH, the intended level of protection will usually be maintained or exceeded if either (1) data are available to demonstrate that alkalinity and/or pH do not affect the toxicity of the metal, or (2) the hardness used in the hardness equation is the hardness of upstream water that does not contain the effluent. The level of protection intended by the 1985 guidelines can also be provided by using the WER procedure.

In some cases, capping hardness at 400 mg/l might result in a level of protection that is higher than that intended by the 1985 guidelines, but any such increase in the level of protection can be overcome by use of the WER procedure. For metals whose criteria are expressed as hardness equations, use of the WER procedure will generally be intended to account for effects of such water quality characteristics as total organic carbon on the toxicities of metals. The WER procedure is equally useful for accounting for any deviation from a hardness equation in a site water.

3. Human Health Criteria

EPA's CWA section 304(a) human health criteria guidance provides criteria recommendations to minimize adverse human effects due to substances in ambient water. EPA's CWA section 304(a) criteria guidance for human health are based on two types of

toxicological endpoints: (1) carcinogenicity and (2) systemic toxicity (i.e., all other adverse effects other than cancer). Thus, there are two procedures for assessing these health effects: one for carcinogens and one for non-carcinogens.

If there are no data on how a chemical agent causes cancer, EPA's existing human health guidelines assume that carcinogenicity is a "non-threshold phenomenon," that is, there are no "safe" or "no-effect levels" because even extremely small doses are assumed to cause a finite increase in the incidence of the effect (i.e., cancer). Therefore, EPA's water quality criteria guidance for carcinogens are presented as pollutant concentrations corresponding to increases in the risk of developing cancer. See Human Health Guidelines at 45 FR 79347.

With existing criteria, pollutants that do not manifest any apparent carcinogenic effect in animal studies (i.e., systemic toxicants), EPA assumes that the pollutant has a threshold below which no effect will be observed. This assumption is based on the premise that a physiological mechanism exists within living organisms to avoid or overcome the adverse effect of the pollutant below the threshold concentration.

Note: Recent changes in the Agency's cancer guidelines addressing these assumptions are described in the Draft Water Quality Criteria Methodology: Human Health, 63 FR 43756, August 14, 1998.

The human health risks of a substance cannot be determined with any degree of confidence unless dose-response relationships are quantified. Therefore, a dose-response assessment is required before a criterion can be calculated. The dose-response assessment determines the quantitative relationships between the amount of exposure to a substance and the onset of toxic injury or disease. Data for determining dose-response relationships are typically derived from animal studies, or less frequently, from epidemiological studies in exposed populations.

The dose-response information needed for carcinogens is an estimate of the carcinogenic potency of the compound. Carcinogenic potency is defined here as a general term for a chemical's human cancer-causing potential. This term is often used loosely to refer to the more specific carcinogenic or cancer slope factor which is defined as an estimate of carcinogenic potency derived from animal studies or epidemiological data of human exposure. It is based on extrapolation from test exposures of high doses over relatively short periods of time to more realistic low doses over a lifetime exposure period by use of linear extrapolation models. The cancer slope factor, q1*, is EPA's estimate of carcinogenic potency and is intended to be a conservative upper bound estimate (e.g. 95% upper bound confidence limit).

For non-carcinogens, EPA uses the reference dose (RfD) as the dose-response parameter in calculating the criteria. For non-carcinogens, oral RfD assessments (hereinafter simply "RfDs") are developed based on pollutant concentrations that cause threshold effects. The RfD is an estimate (with uncertainty spanning perhaps an order of magnitude) of a daily exposure to the human population (including sensitive subgroups) that is likely to be without appreciable risk of deleterious effects during a lifetime. See Human Health Guidelines. The RfD was formerly referred to as an "Acceptable Daily Intake" or ADI. The RfD is useful as a reference point for gauging the potential effect of other doses. Doses that are less than the RfD are not likely to be associated with any health risks, and are therefore less likely to be of regulatory concern. As the frequency of exposures exceeding the RfD increases and as the size of the excess increases, the probability increases that adverse effect may be observed in a human population. Nonetheless, a clear conclusion cannot be categorically drawn that all doses below the RfD are "acceptable" and that all doses in excess of the RfD are "unacceptable." In extrapolating non-carcinogen animal test data to humans to derive an RfD, EPA divides either a No Observed-Adverse Effect Level (NOAEL), Lowest Observed Adverse Effect Level (LOAEL), or other benchmark dose observed in animal studies by an "uncertainty factor" which is based on professional judgment of toxicologists and typically ranges from 10 to 10,000.

For CWA section 304(a) human health criteria development, EPA typically considers only exposures to a pollutant that occur through the ingestion of water and contaminated fish and shellfish. Thus, the criteria are based on an assessment of risks related to the surface water exposure route only where designated uses are drinking water and fish and shellfish consumption.

The assumed exposure pathways in calculating the criteria are the consumption of 2 liters per day of water at the criteria concentration and the consumption of 6.5 grams per day of fish and shellfish contaminated at a level equal to the criteria concentration but multiplied by a "bioconcentration factor." The use of fish and shellfish consumption as an exposure factor requires the quantification of pollutant residues in the edible portions of the ingested species.

Bioconcentration factors (BCFs) are used to relate pollutant residues in aquatic organisms to the pollutant concentration in ambient waters. BCFs are quantified by various procedures depending on the lipid solubility of the pollutant. For lipid soluble pollutants, the average BCF is calculated from the weighted average percent lipids in the edible portions of fish and shellfish, which is about 3%; or it is calculated from theoretical considerations using the octanol/water partition coefficient. For non-lipid soluble compounds, the BCF is determined empirically. The assumed water consumption is taken from the National Academy of Sciences publication *Drinking Water and Health* (1977). (Referenced in the Human Health Guidelines.) This value is appropriate as it includes a margin of safety so that the general population is protected. See also EPA's discussion of the 2.0 liters/day assumption at 61 FR 65183 (Dec. 11, 1996). The 6.5 grams per day contaminated fish and shellfish consumption value was equivalent to the average per-capita consumption rate of all (contaminated and non-contaminated) freshwater and estuarine fish and shellfish for the U.S. population. See Human Health Guidelines.

EPA assumes in calculating water quality criteria that the exposed individual is an average adult with body weight of 70 kilograms. EPA assumes 6.5 grams per day of contaminated fish and shellfish consumption and 2.0 liters per day of contaminated drinking water consumption for a 70 kilogram person in calculating the criteria. Regarding issues concerning criteria development and differences in dose per kilogram of body weight, RfDs are always derived based on the most sensitive health effect endpoint. Therefore, when that basis is due to a chronic or lifetime health effect, the exposure parameters assume the exposed individual to be the average adult, as indicated above.

In the absence of this final rule, there may be particular risks to children. EPA believes that children are protected by the human health criteria contained in this final rule. Children are protected against other less sensitive adverse health endpoints due to the conservative way that the RfDs are derived. An RfD is a public health protective endpoint. It is an amount of a chemical that can be consumed on a daily basis for a lifetime without expecting an adverse effect. RfDs are based on sensitive health endpoints and

are calculated to be protective for sensitive human sub-populations including children. If the basis of the RfD was due to an acute or shorter-term developmental effect, EPA uses exposure parameters other than those indicated above. Specifically, EPA uses parameters most representative of the population of concern (*e.g.*, the health criteria for nitrates based on infant exposure parameters). For carcinogens, the risk assessments are upper bound one in a million (10^{-6}) lifetime risk numbers. The risk to children is not likely to exceed these upper bounds estimates and may be zero at low doses. The exposure assumptions for drinking water and fish protect children because they are conservative for infants and children. EPA assumes 2 liters of untreated surface water and 6.5 grams of freshwater and estuarine fish are consumed each day. EPA believes the adult fish consumption assumption is conservative for children because children generally consume marine fish not freshwater and estuarine.

EPA has a process to develop a scientific consensus on oral reference dose assessments and carcinogenicity assessments (hereinafter simply cancer slope factors or slope factors or q1*s). Through this process, EPA develops a consensus of Agency opinion which is then used throughout EPA in risk management decision-making. EPA maintains an electronic data base which contains the official Agency consensus for oral RfD assessments and carcinogenicity assessments which is known as the Integrated Risk Information System (IRIS). It is available for use by the public on the National Institutes of Health's National Library of Medicine's TOXNET system, and through diskettes from the National Technical Information Service (NTIS). (NTIS access number is PB 90–591330.)

Section 304(a)(1) of the CWA requires EPA to periodically revise its criteria guidance to reflect the latest scientific knowledge: "(A) On the kind and extent of all identifiable effects on health and welfare * * *; (B) on the concentration and dispersal of pollutants, or their byproducts, through biological, physical, and chemical processes; and (C) on the effects of pollutants on the biological community diversity, productivity, and stability, including information on the factors affecting eutrophication rates of organic and inorganic sedimentation for varying types of receiving waters." In developing up-to-date water quality criteria for the protection of human health, EPA uses the most recent IRIS values (RfDs and q1*s) as the toxicological basis in the criterion calculation. IRIS reflects EPA's most current consensus on the toxicological assessment for a chemical. In developing the criteria in today's rule, the IRIS values as of October 1996 were used together with currently accepted exposure parameters for bioconcentration, fish and shellfish and water consumption, and body weight. The IRIS cover sheet for each pollutant criteria included in today's rule is contained in the administrative record.

For the human health criteria included in today's rule, EPA used the Human Health Guidelines on which criteria recommendations from the appropriate CWA section 304(a) criteria guidance document were based. (These documents are also placed in the administrative record for today's rule.) Where EPA has changed any parameters in IRIS used in criteria derivation since issuance of the criteria guidance document, EPA recalculated the criteria recommendation with the latest IRIS information. Thus, there are differences between the original 1980 criteria guidance document recommendations, and those in this rule, but this rule presents EPA's most current CWA section 304(a) criteria recommendation. The basis (q1* or RfD) and BCF for each pollutant criterion in today's rule is contained in the rule's Administrative Record Matrix which is included in the administrative record for the rule. In addition, all recalculated human health numbers are denoted by an "a" in the criteria matrix in 40 CFR 131.38(b)(1) of the rule. The pollutants for which a revised human health criterion has been calculated since the December 1992 NTR include:

mercury
dichlorobromomethane
1,2-dichloropropane
1,2-trans-dichloroethylene
2,4-dimethylphenol
acenaphthene
benzo(a)anthracene
benzo(a)pyrene
benzo(b)flouranthene
benzo(k)flouranthene
2-chloronaphthalene
chrysene
dibenzo(a,h)anthracene
indeno(1,2,3-cd)pyrene
N-nitrosodi-n-propylamine
alpha-endosulfan
beta-endosulfan
endosulfan sulfate
2-chlorophenol
butylbenzyl phthalate
polychlorinated biphenyls.

In November of 1991, the proposed NTR presented criteria for several pollutants in parentheses. These were pollutants for which, in 1980, insufficient information existed to develop human health water quality criteria, but for which, in 1991, sufficient information existed. Since these criteria did not undergo the public review and comment in a manner similar to the other water quality criteria presented in the NTR (for which sufficient information was available in 1980 to develop a criterion, as presented in the 1980 criteria guidance documents), they were not proposed for adoption into the water quality criteria, but were presented to serve as notice for inclusion in future State triennial reviews. Today's rule promulgates criteria for these nine pollutants:

copper
1, 2-dichloropropane
1,2-trans-dichloroethylene
2,4-dimethylphenol
acenaphthene
2-chloronaphthalene
N-nitrosodi-n-propylamine
2-chlorophenol
butylbenzene phthalate

All the criteria are based on IRIS values—either an RfD or q1*—which were listed on IRIS as of November 1991, the date of the proposed NTR. These values have not changed since the final NTR was published in December of 1992. The rule's Administrative Record Matrix in the administrative record of today's rule contains the specific RfDs, q1*s, and BCFs used in calculating these criteria.

Proposed Changes to the Human Health Criteria Methodology: EPA recently proposed revisions to the 1980 ambient water quality criteria derivation guidelines (the Human Health Guidelines). See *Draft Water Quality Criteria Methodology: Human Health,* 63 FR 43756, August 14, 1998; see also *Draft Water Quality Criteria Methodology: Human Health,* U.S. EPA Office of Water, EPA 822–Z–98–001. The EPA revisions consist of five documents: *Draft Water Quality Criteria Methodology: Human Health,* EPA 822–Z–98–001; *Ambient Water Quality Criteria Derivation Methodology Human Health, Technical Support Document, Final Draft,* EPA–822–B–98–005; and three Ambient Water Quality Criteria for the Protection of Human Health, Drafts—one each for Acrylonitrile, 1,3-Dichloropropene (1,3-DCP), and Hexachlorobutadiene (HCBD), respectively, EPA–822–R–98–006, –005, and –004. All five documents are contained in the administrative record for today's rule.

The proposed methodology revisions reflect significant scientific advances that have occurred during the past nineteen years in such key areas as cancer and noncancer risk assessments, exposure assessments and bioaccumulation. For specific details on

these proposed changes and others, please refer to the **Federal Register** notice or the EPA document.

It should be noted that some of the proposed changes may result in significant numeric changes in the ambient water quality criteria. However, EPA will continue to rely on existing criteria as the basis for regulatory and non-regulatory decisions, until EPA revises and reissues a 304(a) criteria guidance using the revised final human health criteria methodology. The existing criteria are still viewed as scientifically acceptable by EPA. The intention of the proposed methodology revisions is to present the latest scientific advancements in the areas of risk and exposure assessment in order to incrementally improve the already sound toxicological and exposure bases for these criteria. As EPA's current human health criteria are the product of many years worth of development and peer review, it is reasonable to assume that revisiting all existing criteria, and incorporating peer review into such review, could require comparable amounts of time and resources. Given these circumstances, EPA proposed a process for revisiting these criteria as part of the overall revisions to the methodology for deriving human health criteria. This process is discussed in the Implementation Section of the Notice of *Draft Revisions to the Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health* (see 63 FR 43771–43776, August 14; 1998).

The State of California in its Ocean Plan, adopted in 1990 and approved by EPA in 1991, established numeric water quality criteria using an average fish and shellfish consumption rate of 23 grams per day. This value is based on an earlier California Department of Health Services estimate. The State is currently in the process of readopting its water quality control plans for inland surface waters, enclosed bays, and estuaries. The State intends to consider information on fish and shellfish consumption rates evaluated and summarized in a report prepared by the State's Pesticide and Environmental Toxicology Section of the Office of Environmental Health Hazard Assessment of the California Environmental Protection Agency. The report, entitled, *Chemicals in Fish Report No. 1: Consumption of Fish and Shellfish in California and the United States,* was published in final draft form in July of 1997, and released to the public on September 16, 1997. The report is currently undergoing final evaluation, and is expected to published in final form in the near future. This final draft report is contained in the administrative record for today's rule. Although EPA has not used this fish consumption value here because this information has not yet been finalized, the State may use any appropriate higher state-specific fish and shellfish consumption rates in its readoption of criteria in its statewide plans.

a. 2,3,7,8-TCDD (Dioxin) Criteria

In today's action, EPA is promulgating human health water quality criteria for 2,3,7,8-tetrachlorodibenzo-p-dioxin ("dioxin") at the same levels as promulgated in the NTR, as amended. These criteria are derived from EPA's 1984 CWA section 304(a) criteria guidance document for dioxin.

For National Pollutant Discharge Elimination System (NPDES) purposes, EPA supports the regulation of other dioxin and dioxin-like compounds through the use of toxicity equivalencies or TEQs in NPDES permits (see discussion below). For California waters, if the discharge of dioxin or dioxin-like compounds has reasonable potential to cause or contribute to a violation of a narrative criterion, numeric water quality-based effluent limits for dioxin or dioxin-like compounds should be included in NPDES permits and should be expressed using a TEQ scheme.

EPA has been evaluating the health threat posed by dioxin nearly continuously for over two decades. Following issuance of the 1984 criteria guidance document, evaluating the health effects of dioxin and recommending human health criteria for dioxin, EPA prepared draft reassessments reviewing new scientific information relating to dioxin in 1985 and 1988. EPA's Science Advisory Board (SAB), reviewing the 1988 draft reassessment, concluded that while the risk assessment approach used in 1984 criteria guidance document had inadequacies, a better alternative was unavailable (see SAB's *Dioxin Panel Review of Documents from the Office or Research and Development relating to the Risk and Exposure Assessment of 2,3,7,8-TCDD* (EPA–SAB–EC–90–003, November 28, 1989) included in the administrative record for today's rule). Between 1988 and 1990, EPA issued numerous reports and guidances relating to the control of dioxin discharges from pulp and paper mills. See e.g., EPA Memorandum, "Strategy for the Regulation of Discharges of PHDDs & PHDFs from Pulp and Paper Mills to the Waters of the United States," from Assistant Administrator for Water to Regional Water Management Division Directors and NPDES State Directors, dated May 21, 1990 (AR NL–16); EPA Memorandum, "State Policies, Water Quality Standards, and Permit Limitations Related to 2,3,7,8-TCDD in Surface Water," from the Assistant Administrator for Water to Regional Water Management Division Directors, dated January 5, 1990 (AR VA–66). These documents are available in the administrative record for today's rule.

In 1991, EPA's Administrator announced another scientific reassessment of the risks of exposure to dioxin (see Memorandum from Administrator William K. Reilly to Erich W. Bretthauer, Assistant Administrator for Research and Development and E. Donald Elliott, General Counsel, entitled *Dioxin: Follow-Up to Briefing on Scientific Developments,* April 8, 1991, included in the administrative record for today's rule). At that time, the Administrator made clear that while the reassessment was underway, EPA would continue to regulate dioxin in accordance with existing Agency policy. Thereafter, the Agency proceeded to regulate dioxin in a number of environmental programs, including standards under the Safe Drinking Water Act and the CWA.

The Administrator's promulgation of the dioxin human health criteria in the 1992 NTR affirmed the Agency's decision that the ongoing reassessment should not defer or delay regulating this potent contaminant, and further, that the risk assessment in the 1984 criteria guidance document for dioxin continued to be scientifically defensible. Until the reassessment process was completed, the Agency could not "say with any certainty what the degree or directions of any changes in the risk estimates might be" (57 FR 60863–64).

The basis for the dioxin criteria as well as the decision to include the dioxin criteria in the 1992 NTR pending the results of the reassessment were challenged. See *American Forest and Paper Ass'n, Inc. et al.* v. *U.S. EPA* (Consolidated Case No. 93–0694 (RMU) D.D.C.). By order dated September 4, 1996, the Court upheld EPA's decision. EPA's brief and the Court's decision are included in the administrative record for today's rule.

EPA has undertaken significant effort toward completion of the dioxin reassessment. On September 13, 1994, EPA released for public review and comment a draft reassessment of toxicity and exposure to dioxin. See *Health Assessment Document for 2,3,7,8-Tetrachlorobenzo-p-Dioxin (TCDD) and Related Compounds,* U.S. EPA, 1994. EPA is currently addressing comments made by the public and the SAB and anticipates that the final

revised reassessment will go to the SAB in the near future. With today's rule, the Agency reaffirms that, notwithstanding the on-going risk reassessment, EPA intends to continue to regulate dioxin to avoid further harm to public health, and the basis for the dioxin criteria, both in terms of the cancer potency and the exposure estimates, remains scientifically defensible. The fact that EPA is reassessing the risk of dioxin, virtually a continuous process to evaluate new scientific information, does not mean that the current risk assessment is "wrong". It continues to be EPA's position that until the risk assessment for dioxin is revised, EPA supports and will continue to use the existing risk assessment for the regulation of dioxin in the environment. Accordingly, EPA today promulgates dioxin criteria based on the 1984 criteria guidance document for dioxin and promulgated in the NTR in 1992.

Toxicity Equivalency: The State of California, in its 1991 water quality control plans, adopted human health criteria for dioxin and dioxin-like compounds based on the concept of toxicity equivalency (TEQ) using toxicity equivalency factors (TEFs). EPA Region 9 reviewed and approved the State's use of the TEQ concept and TEFs in setting the State's human health water quality criteria for dioxin and dioxin-like compounds.

In 1987, EPA formally embraced the TEQ concept as an interim procedure to estimate the risks associated with exposures to 210 chlorinated dibenzo-p-dioxin and chlorinated dibenzofuran (CDD/CDF) congeners, including 2,3,7,8-TCDD. This procedure uses a set of derived TEFs to convert the concentration of any CDD/CDF congener into an equivalent concentration of 2,3,7,8-TCDD. In 1989, EPA updated its TEFs based on an examination of relevant scientific evidence and a recognition of the value of international consistency. This updated information can be found in EPA's 1989 *Update to the Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-dioxins and -dibenzofurans (CDDs and CDFs)* (EPA/625/3–89/016, March 1989). EPA had been active in an international effort aimed at adopting a common set of TEFs (International TEFs/89 or I–TEFs/89), to facilitate information exchange on environmental contamination of CDD/CDF. This document reflects EPA's support of an internationally consistent set of TEFs, the I–TEFs/89. EPA uses I–TEFs/89 in many of its regulatory programs.

In 1994, the World Health Organization (WHO) revised the TEF scheme for dioxins and furans to include toxicity from dioxin-like compounds (Ahlborg et al., 1994). However, no changes were made to the TEFs for dioxins and furans. In 1998, the WHO re-evaluated and revised the previously established TEFs for dioxins (Ds), furans (Fs) and dioxin-like compounds (Vanden Bers, 1998). The nomenclature for this TEF scheme is TEQDFP–WHO98, where TEQ represents the 2,3,7,8-TCDD Toxic Equivalence of the mixture, and the subscript DFP indicates that dioxins (Ds) furans (Fs) and dioxin-like compounds (P) are included in the TEF scheme. The subscript 98 following WHO displays the year changes were made to the TEF scheme.

EPA intends to use the 1998 WHO TEF scheme in the near future. At this point however, EPA will support the use of either the 1989 interim procedures or the 1998 WHO TEF scheme but encourages the use of the 1998 WHO TEF scheme in State programs. EPA expects California to use a TEF scheme in implementing the 2,3,7,8-TCDD water quality criteria contained in today's rule. The TEQ and TEF approach provide a methodology for setting NPDES water quality-based permit limits that are protective of human health for dioxin and dioxin-like compounds.

Several commenters requested EPA to promulgate criteria for other forms of dioxin, in addition to 2,3,7,8-TCDD. EPA's draft reassessment for dioxin examines toxicity based on the TEQ concept and I–TEFs/89. When EPA completes the dioxin reassessment, the Agency intends to adopt revised 304(a) water quality criteria guidance based on the reassessment for dioxin. If necessary, EPA will then act to amend the NTR and CTR to reflect the revised 304(a) water quality criteria guidance.

b. Arsenic Criteria

EPA is not promulgating human health criteria for arsenic in today's rule. EPA recognizes that it promulgated human health water quality criteria for arsenic for a number of States in 1992, in the NTR, based on EPA's 1980 section 304(a) criteria guidance for arsenic established, in part, from IRIS values current at that time. However, a number of issues and uncertainties existed at the time of the CTR proposal concerning the health effects of arsenic. These issues and uncertainties were summarized in "Issues Related to Health Risk of Arsenic" which is contained in the administrative record for today's rule. During the period of this rulemaking action, EPA commissioned a study of arsenic health effects by the National Research Council (NRC) arm of the National Academy of Sciences. EPA received the NRC report in March of 1999. EPA scientists reviewed the report, which recommended that EPA lower the Safe Drinking Water Act arsenic maximum contaminant level (MCL) as soon as possible (The arsenic MCL is currently 50 μg/l.) The bladder cancer analysis in the NRC report will provide part of the basis for the risk assessment of a proposed revised arsenic MCL in the near future. After promulgating a revised MCL for drinking water, the Agency plans to revise the CWA 304(a) human health criteria for arsenic in order to harmonize the two standards. Today's rule defers promulgating arsenic criteria based on the Agency's previous risk assessment of skin cancer. In the meantime, permitting authorities in California should rely on existing narrative water quality criteria to establish effluent limitations as necessary for arsenic. California has previously expressed its science and policy position by establishing a criterion level of 5 μg/l for arsenic. Permitting authorities may, among other considerations, consider that value when evaluating and interpreting narrative water quality criteria.

c. Mercury Criteria

The human health criteria promulgated here use the latest RfD in EPA's Integrated Risk Information System (IRIS) and the weighted average practical bioconcentration factor (PBCF) from the 1980 section 304(a) criteria guidance document for mercury. EPA considered the approach used in the Great Lakes Water Quality Guidance ("Guidance") incorporating Bioaccumulation Factors (BAFs), but rejected this approach for reasons outlined below. The equation used here to derive an ambient water quality criterion for mercury from exposure to organisms and water is:

$$HHC = \frac{RfD \times BW}{WC + (FC \times PBCF)}$$

Where:

RfD = Reference Dose
BW = Body Weight
WC = Water Consumption
FC = Total Fish and Shellfish Consumption per Day
PBCF = Practical Bioconcentration Factor (weighted average)

For mercury, the most current RfD from IRIS is 1×10^{-4} mg/kg/day. The RfD used a benchmark dose as an estimate of a No Observed Adverse Effect Level (NOAEL). The benchmark dose was calculated by applying a Weibel model

for extra risk to all neurological effects observed in 81 Iraqi children exposed in utero as reported in Marsh, et. al. (1987). Maternal hair mercury was the measure of exposure. Extra risk refers to an adjustment for background incidence of a given health effect. Specifically, the extra risk is the added incidence of observing an effect above the background rate relative to the proportion of the population of interest that is not expected to exhibit such as effect. The resulting estimate was the lower 95% statistical bound on the 10% extra risk; this was 11 ppm mercury in maternal hair. This dose in hair was converted to an equivalent ingested amount by applying a model based on data from human studies; the resulting benchmark dose was 1×10^{-3} mg/kg body weight /day. The RfD was calculated by dividing the benchmark dose by a composite uncertainty factor of 10. The uncertainty factor was used to account for variability in the human population, in particular the wide variation in biological half-life of methylmercury and the variation that is observed in the ration of hair mercury to mercury in the blood. In addition the uncertainty factor accounts for lack of a two-generation reproductive study and the lack of data on long term effects of childhood mercury exposures. The RfD thus calculated is 1×10^{-4} mg/kg body weight/day or 0.1 µg/kg/day. The body weight used in the equation for the mercury criteria, as discussed in the Human Health Guidelines, is a mean adult human body weight of 70 kg. The drinking water consumption rate, as discussed in the Human Health Guidelines, is 2.0 liters per day.

The bioconcentration factor or BCF is defined as the ratio of chemical concentration in the organism to that in surrounding water. Bioconcentration occurs through uptake and retention of a substance from water only, through gill membranes or other external body surfaces. In the context of setting exposure criteria it is generally understood that the terms "BCF" and "steady-state BCF" are synonymous. A steady-state condition occurs when the organism is exposed for a sufficient length of time that the ratio does not change substantially.

The BCFs that were used herein are the "Practical Bioconcentration Factors (PBCFs)" that were derived in 1980: 5500 for fresh water, 3765 for estuarine coastal waters, and 9000 for open oceans. See pages C–100–1 of Ambient Water Quality Criteria for Mercury (EPA 440/5–80–058) for a complete discussion on the PBCF. Because of the way they were derived, these PBCFs take into account uptake from food as well as uptake from water. A weighted average PBCF was calculated to take into account the average consumption from the three waters using the following equation:

$$\text{Weighted Average Practical BCF} = \frac{\sum(\text{FC} \times \text{PBCF})}{\sum(\text{FC})} = \frac{(0.00172)(5500)+(0.00478)(3765)+(0.0122)(9000)}{0.00172+0.00478+0.0122} = \frac{137.3}{0.0187} = 7342.6$$

Given the large value for the weighted average PBCF, the contribution of drinking water to total daily intake is negligible so that assumptions concerning the chemical form of mercury in drinking water become less important. The human health mercury criteria promulgated for this rule are based on the latest RfD as listed in IRIS and a weighted PBCF from the 1980 § 304(a) criteria guidance document for mercury.

On March 23, 1995 (60 FR 15366), EPA promulgated the Great Lakes Water Quality Guidance ("Guidance"). The Guidance incorporated bioaccumulation factors (BAFs) in the derivation of criteria to protect human health because it is believed that BAFs are a better predictor than BCFs of the concentration of a chemical within fish tissue since BAFs include consideration of the uptake of contaminants from all routes of exposure. A bioaccumulation factor is defined as the ratio (in L/kg) of a substance's concentration in tissue to the concentration in the ambient water, in situations where both the organism and its food are exposed and the ratio does not change substantially over time. The final Great Lakes Guidance establishes a hierarchy of four methods for deriving BAFs for non-polar organic chemicals: (1) Field-measured BAFs; (2) predicted BAFs derived using a field-measured biota-sediment accumulation factor; (3) predicted BAFs derived by multiplying a laboratory-measured BCF by a food chain multiplier; and (4) predicted BAFs derived by multiplying a BCF calculated from the log Kow by a food-chain multiplier. The final Great Lakes Guidance developed BAFs for trophic levels three and four fish of the Great Lakes Basin. Respectively, the BAFs for mercury for trophic level 3 and 4 fish were: 27,900 and 140,000.

The BAF promulgated in the GLI was developed specifically for the Great Lakes System. It is uncertain whether the BAFs of 27,900 and 140,000 are appropriate for use in California at this time; therefore, today's final rule does not use the GLI BAF in establishing human health criteria for mercury in California. The magnitude of the BAF for mercury in a given system depends on how much of the total mercury is present in the methylated form. Methylation rates vary widely from one water body to another for reasons that are not fully understood. Lacking the data, it is difficult to determine if the BAF used in the GLI represents the true potential for mercury to bioaccumulate in California surface waters. The true, average BAF for California could be higher or lower. For more information see EPA's Response to Comments document in the administrative record for this rule (specifically comments CTR–002–007(b) and CTR–016–007).

EPA is developing a national BAF for mercury as part of revisions to its 304(a) criteria for human health; however, the BAF methodology that will be used is currently under evaluation as part of EPA's revisions to its National Human Health Methodology (see section F.3 above). EPA applied a similar methodology in its Mercury Study Report to Congress (MSRC) to derive a BAF for methylmercury. The MSRC is available through NTIS (EPA–452/R–97–003). Although a BAF was derived in the MSRC, EPA does not intend to use this BAF for National application. EPA is engaged in a separate effort to incorporate additional mercury bioaccumulation data that was not considered in the MSRC, and to assess uncertainties with using a National BAF approach for mercury. Once the proposed revised human health methodology, including the BAF component, is finalized, EPA will revise its 304(a) criteria for mercury to reflect changes in the underlying methodology, recommendations contained in the MSRC, and recommendations in a National Academy of Science report on human health assessment of methylmercury. When EPA changes its 304(a) criteria recommendation for mercury, States and Tribes will be expected to review their water quality standards for mercury and make any revisions necessary to ensure their standards are scientifically defensible.

New information may become available regarding the bioaccumulation

of mercury in certain water bodies in California. EPA supports the use of this information to develop site-specific criteria for mercury. Further, if a California water body is impaired due to mercury fish tissue or sediment contamination, loadings of mercury could contribute to or exacerbate the impairment. Therefore, one option regulatory authorities should consider is to include water quality-based effluent limits (WQBELs) in permits based on mass for discharges to the impaired water body. Such WQBELs must be derived from and comply with applicable State water quality standards (including both numeric and narrative criteria) and assure that the discharge does not cause or contribute to a violation of water quality standards.

d. Polychlorinated Biphenyls (PCBs) Criteria

The NTR, as amended, calculated human health criteria for PCBs using a cancer potency factor of 7.7 per mg/kg-day from the Agency's IRIS. This cancer potency factor was derived from the Norback and Weltman (1985) study which looked at rats that were fed Aroclor 1260. The study used the linearized multistage model with a default cross-species scaling factor (body weight ratio to the ⅔ power). Although it is known that PCB mixtures vary greatly as to their potency in producing biological effects, for purposes of its carcinogenicity assessment, EPA considered Aroclor 1260 to be representative of all PCB mixtures. The Agency did not pool data from all available congener studies or generate a geometric mean from these studies, since the Norback and Weltman study was judged by EPA as acceptable, and not of marginal quality, in design or conduct as compared with other studies. Thereafter, the Institute for Evaluating Health Risks (IEHR, 1991) reviewed the pathological slides from the Norback and Weltman study, and concluded that some of the malignant liver tumors should have been interpreted as nonmalignant lesions, and that the cancer potency factor should be 5.1 per mg/kg-day as compared with EPA's 7.7 per mg/kg-day.

The Agency's peer-reviewed reassessment of the cancer potency of PCBs published in a final report, *PCBs: Cancer Dose-Response Assessment and Applications to Environmental Mixtures* (EPA/600/P–96/001F), adopts a different approach that distinguishes among PCB mixtures by using information on environmental processes. (The report is included in the administrative record of today's rule.) The report considers all cancer studies (which used commercial mixtures only) to develop a range of cancer potency factors, then uses information on environmental processes to provide guidance on choosing an appropriate potency factor for representative classes of environmental mixtures and different pathways. The reassessment provides that, depending on the specific application, either central estimates or upper bounds can be appropriate. Central estimates describe a typical individual's risk, while upper bounds provide assurance (*i.e.*, 95% confidence) that this risk is not likely to be underestimated if the underlying model is correct. Central estimates are used for comparing or ranking environmental hazards, while upper bounds provide information about the precision of the comparison or ranking. In the reassessment, the use of the upper bound values were found to increase cancer potency estimates by two or three-fold over those using central tendency. Upper bounds are useful for estimating risks or setting exposure-related standards to protect public health, and are used by EPA in quantitative cancer risk assessment. Thus, the cancer potency of PCB mixtures is determined using a tiered approach based on environmental exposure routes with upper-bound potency factors (using a body weight ratio to the ¾ power) ranging from 0.07 (lowest risk and persistence) to 2 (high risk and persistence) per mg/kg-day for average lifetime exposures to PCBs. It is noteworthy that bioaccumulated PCBs appear to be more toxic than commercial PCBs and appear to be more persistent in the body. For exposure through the food chain, risks can be higher than other exposures.

EPA issued the final reassessment report on September 27, 1996, and updated IRIS to include the reassessment on October 1, 1996. EPA updated the human health criteria for PCBs in the National Toxics Rule on September 27, 1999. For today's rule, EPA derived the human health criteria for PCBs using a cancer potency factor of 2 per mg/kg-day, an upper bound potency factor reflecting high risk and persistence. This decision is based on recent multimedia studies indicating that the major pathway of exposure to persistent toxic substances such as PCBs is via dietary exposure (*i.e.*, contaminated fish and shellfish consumption).

Following is the calculation of the human health criterion (HHC) for organism and water consumption:

$$HHC = \frac{RF \times BW \times (1{,}000\ \mu g/mg)}{q1^* \times [WC + (FC \times BCF)]}$$

Where:

RF = Risk Factor = 1×10^{-6}
BW = Body Weight = 70 kg
q1* = Cancer slope factor = 2 per mg/kg-day
WC = Water Consumption = 2 l/day
FC = Fish and Shellfish Consumption = 0.0065 kg/day
BCF = Bioconcentration Factor = 31,200

the HHC (μg/l) = 0.00017 μg/l (rounded to two significant digits).

Following is the calculation of the human health criterion for organism only consumption:

$$HHC = \frac{RF \times BW \times (1{,}000\ \mu g/mg)}{q1^* \times FC \times BCF}$$

Where:

RF = Risk Factor = 1×10^{-6}
BW = Body Weight = 70 kg
q1* = Cancer slope factor = 2 per mg/kg-day
FC = Total Fish and Shellfish Consumption per Day = 0.0065 kg/day
BCF = Bioconcentration Factor = 31,200

the HHC (μg/l) = 0.00017 μg/l (rounded to two significant digits).

The criteria are both equal to 0.00017 μg/l and apply to total PCBs. *See PCBs: Cancer Dose Response Assessment and Application to Environmental Mixtures* (EPA/600/9–96–001F). For a discussion of the body weight, water consumption, and fish and shellfish consumption factors, see the Human Health Guidelines. For a discussion of the BCF, see the 304(a) criteria guidance document for PCBs (included in the administrative record for today's rule).

e. Excluded Section 304(a) Human Health Criteria

As is the case in the NTR, as amended, today's rule does not promulgate criteria for certain priority pollutants for which CWA section 304(a) criteria guidance exists because those criteria were not based on toxicity to humans or aquatic organisms. The basis for those particular criteria is organoleptic effects (*e.g.*, taste and odor) which would make water and edible aquatic life unpalatable but not toxic. Because the basis for this rule is to protect the public health and aquatic life from toxicity consistent with the language and intent in CWA section 303(c)(2)(B), EPA is promulgating criteria only for those priority toxic pollutants whose criteria recommendations are based on toxicity. The CWA section 304(a) human health criteria based on organoleptic effects for zinc and 3-methyl-4-chlorophenol are excluded for this reason. See the 1992 NTR discussion at 57 FR 60864.

f. Cancer Risk Level

EPA's CWA section 304(a) criteria guidance documents for priority toxic pollutants that are based on carcinogenicity present concentrations for upper bound risk levels of 1 excess cancer case per 100,000 people (10^{-5}), per 1,000,000 people (10^{-6}), and per 10,000,000 people (10^{-7}). However, the criteria documents do not recommend a particular risk level as EPA policy.

As part of the proposed rule, EPA requested and received comment on the adoption of a 10^{-5} risk level for carcinogenic pollutants. The effect of a 10^{-5} risk level would have been to increase (*i.e.,* make less stringent) carcinogenic pollutant criteria values (noted in the matrix by footnote c) that are not already promulgated in the NTR, by one order of magnitude. For example, the organism-only criterion for gamma BHC (pollutant number 105 in the matrix) is 0.013 µg/l; the criterion based on a 10^{-5} risk level would have been 0.13 µg/l. EPA received several comments that indicated a preference for a higher (10^{-4} and 10^{-5}) risk level for effluent dependent waters or other types of special circumstances.

In today's rule, EPA is promulgating criteria that protect the general population at an incremental cancer risk level of one in a million (10^{-6}) for all priority toxic pollutants regulated as carcinogens, consistent with the criteria promulgated in the NTR for the State of California. Standards adopted by the State contained in the Enclosed Bays and Estuaries Plan (EBEP), and the Inland Surface Waters Plan (ISWP), partially approved by EPA on November 6, 1991, and the Ocean Plan approved by EPA on June 28, 1990, contained a risk level of 10^{-6} for most carcinogens. The State has historically protected at a 10^{-6} risk level for carcinogenic pollutants.

EPA, in its recent human health methodology revisions, proposed acceptable lifetime cancer risk for the general population in the range of 10^{-5} to 10^{-6}. EPA also proposed that States and Tribes ensure the most highly exposed populations do not exceed a 10^{-4} risk level. However, EPA's draft methodology revisions also stated that it will derive 304(a) criteria at a 10^{-6} risk level, which the Agency believes reflects the appropriate risk for the general population and which applies a risk management policy which ensures protection for all exposed population groups. (Draft Water Quality Criteria Methodology: Human Health, EPA 822–Z–98–001, August 1998, Appendix II, page 72).

Subpopulations within a State may exist, such as recreational and subsistence anglers, who as a result of greater exposure to a contaminant are at greater risk than the standard 70 kilogram person eating 6.5 grams per day of fish and shellfish and drinking 2.0 liters per day of drinking water with pollutant levels meeting the water quality criteria. EPA acknowledges that at any given risk level for the general population, those segments of the population that are more highly exposed face a higher relative risk. For example, if fish are contaminated at a level permitted by criteria derived on the basis of a risk level of 10^{-6}, individuals consuming up to 10 times the assumed fish consumption rate would still be protected at a 10^{-5} risk level. Similarly, individuals consuming 100 times the general population rate would be protected at a 10^{-4} risk level. EPA, therefore, believes that derivation of criteria at the 10^{-6} risk level is a reasonable risk management decision protective of designated uses under the CWA. While outside the scope of this rule, EPA notes that States and Tribes, however, have the discretion to adopt water quality criteria that result in a higher risk level (*e.g.,* 10^{-5}). EPA expects to approve such criteria if the State or Tribe has identified the most highly exposed subpopulation within the State or Tribe, demonstrates the chosen risk level is adequately protective of the most highly exposed subpopulation, and has completed all necessary public participation.

This demonstration has not happened in California. Further, the information that is available on highly exposed subpopulations in California supports the need to protect the general population at the 10^{-6} level. California has cited the Santa Monica Bay Seafood Consumption Study as providing the best available data set for estimating consumption of sport fish and shellfish in California for both marine or freshwater sources (Chemicals in Fish Report No. 1: Consumption of Fish and Shellfish in California and the United States, Final Draft Report, July 1997). Consumption rates of sport fish and shellfish of 21g/day, 50 g/day, 107 g/day, and 161 g/day for the median, mean, 90th, and 95th percentile rates, respectively, were determined from this study. Additional consumption of commercial species in the range of approximately 8 to 42 g/day would further increase these values. Clearly the consumption rates for the most highly exposed subpopulation within the State exceeds 10 times the 6.5 g/day rates used in the CTR. Therefore, use of a risk level of 10^{-5} for the general population would not be sufficient to protect the most highly exposed population in California at a 10^{-4} risk level. On the other hand, even the most highly exposed subpopulations cited in the California study do not have consumption rates approaching 100 times the 6.5 g/day rates used in the CTR. The use of the 10^{-6} risk level to protect average level consumers does not subject these subpopulations to risk levels as high as 10^{-4}.

EPA believes its decision to establish a 10^{-6} risk level for the CTR is also consistent with EPA's policy in the NTR to select the risk level that reflect the policies or preferences of CWA programs in the affected States. California adopted standards for priority toxic pollutants for its ocean waters in 1990 using a 10^{-6} risk level to protect human health (California Ocean Plan, 1990). In April 1991, and again in November 1992, California adopted standards for its inland surface waters and enclosed bays and estuaries in its Inland Surface Waters Plan (ISWP) and its Enclosed Bays and Estuaries Plan (EBEP) using a 10^{-6} risk level. To be consistent with the State's water quality standards, EPA used a 10^{-6} risk level for California in the NTR at 57 FR 60867. The State has continued using a 10^{-6} risk level to protect human health for its standards that were not withdrawn with the ISWP and EBEP. The most recent expression of risk level preference is contained in the Draft Functional Equivalent Document, Amendment of the Water Quality Control Plan for Ocean Waters of California, October 1998, where the State recommended maintaining a consistent risk level of 10^{-6} for the human health standards that it was proposing to revise.

EPA received several comments requesting a 10^{-5} risk level based on the risk level chosen for the Great Lakes Water Quality Guidance (the Guidance). There are several differences between the guidelines for the derivation of human health criteria contained in the Guidance and the California Toxics Rule (CTR) that make a 10^{-5} risk factor appropriate for the Guidance, but not for the CTR. These differences result in criteria developed using the 10^{-5} risk factor in the Guidance being at least as stringent as criteria derived under the CTR using a 10^{-6} risk factor. The relevant aspects of the Guidance include:

- Use of fish consumption rates that are considerably higher than fish consumption rates for the CTR.
- Use of bioaccumulation factors rather than bioconcentration factors in

estimating exposure, considerably increasing the dose of carcinogens to sensitive subgroups.

• Consideration of additivity of effects of mixtures for both carcinogenic and noncarcinogenic pollutants.

This combination of factors increase the calculated carcinogenic risk substantially under the Guidance (the combination would generally be more than one order of magnitude), making a lower overall risk factor acceptable. The Guidance risk factor provides, in fact, criteria with at least the same level of protection against carcinogens as criteria derived with a higher risk factor using the CTR. A lower risk factor for the CTR would not be appropriate absent concomitant changes in the derivation procedures that provide equivalent risk protection.

G. Description of Final Rule

1. Scope

Paragraph (a) in 40 CFR 131.38, entitled "Scope," states that this rule is a promulgation of criteria for priority toxic pollutants in the State of California for inland surface waters, enclosed bays, and estuaries. Paragraph (a) in 40 CFR 131.38 also states that this rule contains an authorizing compliance schedule provision.

2. EPA Criteria for Priority Toxic Pollutants

EPA's criteria for California are presented in tabular form at 40 CFR 131.38. For ease of presentation, the table that appears combines water quality criteria promulgated in the NTR, as amended, that are outside the scope of this rulemaking, with the criteria that are within the scope of today's rule. This is intended to help readers determine applicable water quality criteria for the State of California. The table contains footnotes for clarification.

Paragraph (b) in 40 CFR 131.38 presents a matrix of the applicable EPA aquatic life and/or human health criteria for priority toxic pollutants in California. Section 303(c)(2)(B) of the CWA addresses only pollutants listed as "toxic" pursuant to section 307(a) of the CWA for which EPA has developed section 304(a) criteria guidance. As discussed earlier in this preamble, the section 307(a) list of toxics contains 65 compounds and families of compounds, which potentially include thousands of specific compounds. Of these, the Agency identified a list of 126 "priority toxic pollutants" to implement the CWA (see 40 CFR 131.36(b)). Reference in this rule to priority toxic pollutants, toxic pollutants, or toxics refers to the 126 priority toxic pollutants.

EPA has not developed both aquatic life and human health CWA section 304(a) criterion guidance for all of the priority toxic pollutants. The matrix in 40 CFR 131.38(b) contains human health criteria in Column D for 92 priority toxic pollutants which are divided into Column 1: criteria for water consumption (i.e., 2.0 liters per day) and aquatic organism consumption (i.e., 6.5 grams per day of aquatic organisms); and Column 2: criteria for aquatic organism consumption only. The term aquatic organism includes fish and shellfish such as shrimp, clams, oysters and mussels. One reason the total number of priority toxic pollutants with criteria today differs from the total number of priority toxic pollutants contained in earlier published CWA section 304(a) criteria guidance is because EPA has developed and is promulgating chromium criteria for two valence states with respect to aquatic life criteria. Thus, although chromium is a single priority toxic pollutant, there are two criteria for chromium for aquatic life protection. See pollutant 5 in today's rule at 40 CFR 131.38(b). Another reason is that EPA is promulgating human health criteria for nine priority pollutants for which health-based national criteria have been calculated based on information obtained from EPA's IRIS database (EPA provided notice of these nine criteria in the NTR for inclusion in future State triennial reviews. See 57 FR 60848, 60890).

The matrix contains aquatic life criteria for 23 priority pollutants. These are divided into freshwater criteria (Column B) and saltwater criteria (Column C). These columns are further divided into acute and chronic criteria. The aquatic life criteria are considered by EPA to be protective when applied under the conditions described in the section 304(a) criteria documents and in the TSD. For example, water body uses should be protected if the criteria are not exceeded, on average, once every three year period. It should be noted that the criteria maximum concentrations (the acute criteria) are short-term concentrations and that the criteria continuous concentrations (the chronic criteria) are four-day averages. It should also be noted that for certain metals, the actual criteria are equations which are included as footnotes to the matrix. The toxicity of these metals is water hardness dependent and may be adjusted. The values shown in the table are illustrative only, based on a hardness expressed as calcium carbonate of 100 mg/l. Finally, the criterion for pentachlorophenol is pH dependent. The equation is the actual criterion and is included as a footnote. The value shown in the matrix is for a pH of 7.8. Several of the freshwater aquatic life criteria are incorporated into the matrix in the format used in the 1980 criteria methodology which uses a final acute value instead of a continuous maximum concentration. This distinction is noted in footnote g of the table.

The final rule at 40 CFR 131.38(c) establishes the applicability of the criteria to the State of California. 40 CFR 131.38(d) is described later in Section F, of this preamble. EPA has included in this rule provisions necessary to implement numeric criteria in a way that maintains the level of protection intended. These provisions are included in 40 CFR 131.38(c) of today's rule. For example, in order to do steady state waste load allocation analyses, most States have low flow values for streams and rivers which establish flow rates for various purposes. These low flow values become design flows for sizing treatment plants and developing water quality-based effluent limits and/or TMDLs. Historically, these design flows were selected for the purposes of waste load allocation analyses which focused on instream dissolved oxygen concentrations and protection of aquatic life. With the publication of the 1985 TSD, EPA introduced hydrologically and biologically based analyses for the protection of aquatic life and human health. (These concepts have been expanded subsequently in EPA's *Technical Guidance Manual for Performing Wasteload Allocations, Book 6, Design Conditions,* U.S. EPA, 1986. These analyses are included in Appendix D of the revised TSD. The discussion here is greatly simplified and is provided to support EPA's decision to promulgate design flows for instream flows and thereby maintain the adequacy of the criteria for priority toxic pollutants.) EPA recommended either of two methods for calculating acceptable low flows, the traditional hydrologic method developed by the U.S. Geological Survey or a biological based method developed by EPA. Other methods for evaluating the instream flow record may be available; use of these methods may result in TMDLs and/or water quality-based effluent limitations which adequately protect human health and/or aquatic life. The results of either of these two methods, or an equally protective alternative method, may be used.

The State of California may adopt specific design flows for streams and rivers to protect designated uses against the effects of toxics. EPA believes it is

important to specify design flows in today's rule so that, in the absence of state design flows, the criteria promulgated today would be implemented appropriately. The TSD also recommends the use of three dynamic models to perform wasteload allocations. Dynamic wasteload models do not generally use specific steady state design flows but accomplish the same effect by factoring in the probability of occurrence of stream flows based on the historical flow record.

The low flows specified in the rule explicitly contain duration and frequency of occurrence which represent certain probabilities of occurrence. Likewise, the criteria for priority toxic pollutants are defined with duration and frequency components. Dynamic modeling techniques explicitly predict the effects of variability in receiving water, effluent flow, and pollution variation. Dynamic modeling techniques, as described in the TSD, allow for calculating wasteload allocations that meet the criteria for priority toxic pollutants without using a single, worst-case concentration based on a critical condition. Either dynamic modeling or steady state modeling can be used to implement the criteria promulgated today. For simplicity, only steady state conditions are discussed here. Clearly, if the criteria were implemented using design flows that are too high, the resulting toxic controls would not be adequate, because the resulting ambient concentrations would exceed EPA's criteria.

In the case of aquatic life, assuming exceedences occur more frequently than once in three years on the average, exceedences would result in diminished vitality of stream ecosystems characterized by the loss of desired species. Numeric water quality criteria should apply at all flows that are equal to or greater than flows specified below. The low flow values are:

Type of criteria	Design flow
Acute Aquatic Life (CMC).	1 Q 10 or 1 B 3
Chronic Aquatic Life (CCC).	7 Q 10 or 4 B 3
Human Health	harmonic mean flow

Where:

1 Q 10 is the lowest one day flow with an average recurrence frequency of once in 10 years determined hydrologically;

1 B 3 is biologically based and indicates an allowable exceedence of once every 3 years. It is determined by EPA's computerized method (DFLOW model);

7 Q 10 is the lowest average 7 consecutive day low flow with an average recurrence frequency of once in 10 years determined hydrologically;

4 B 3 is biologically based and indicates an allowable exceedences for 4 consecutive days once every 3 years. It is determined by EPA's computerized method (DFLOW model);

EPA is requiring that the harmonic mean flow be applied with human health criteria. The harmonic mean is a standard calculated statistical value. EPA's model for human health effects assumes that such effects occur because of a long-term exposure to low concentration of a toxic pollutant, for example, two liters of water per day for seventy years. To estimate the concentrations of the toxic pollutant in those two liters per day by withdrawal from streams with a high daily variation in flow, EPA believes the harmonic mean flow is the correct statistic to use in computing such design flows rather than other averaging techniques. (For a description of harmonic means see "Design Stream Flows Based on Harmonic Means," Lewis A. Rossman, Jr. of Hydraulics Engineering, Vol. 116, No. 7, July, 1990.)

All waters (including lakes, estuaries, and marine waters), whether or not suitable for such hydrologic calculations, are subject to the criteria promulgated today. Such criteria will need to be attained at the end of the discharge pipe, unless the State authorizes a mixing zone. Where the State plans to authorize a mixing zone, the criteria would apply at the locations allowed by the mixing zone. For example, the chronic criteria (CCC) would apply at the defined boundary of the chronic mixing zone. Discussion of and guidance on these factors are included in the revised TSD in Chapter 4.

EPA is aware that the criteria promulgated today for some of the priority toxic pollutants are at concentrations less than EPA's current analytical detection limits. Analytical detection limits have never been an acceptable basis for setting water quality criteria since they are not related to actual environmental impacts. The environmental impact of a pollutant is based on a scientific determination, not a measuring technique which is subject to change. Setting the criteria at levels that reflect adequate protection tends to be a forcing mechanism to improve analytical detection methods. See 1985 Guidelines, page 21. As the methods improve, limits based on the actual criteria necessary to protect aquatic life and human health become measurable. The Agency does not believe it is appropriate to promulgate criteria that are not sufficiently protective. EPA discusses this issue further in its Response to Comment Document for today's final rule.

EPA does believe, however, that the use of analytical detection limits are appropriate for assessing *compliance* with National Pollutant Discharge Elimination System (NPDES) permit limits. This view of the role of detection limits was first articulated in guidance for translating dioxin criteria into NPDES permit limits. See "Strategy for the Regulation of Discharges of PHDDs and PHDFs from Pulp and Paper Mills to Waters of the U.S." Memorandum from the Assistant Administrator for Water to the Regional Water Management Division Directors, May 21, 1990. This guidance presented a model for addressing toxic pollutants which have criteria less than current detection limits. EPA, in more recent guidance, recommends the use of the "minimum level" or ML for reporting sample results to assess compliance with WQBELs (TSD page 111). The ML, also called the "quantification level," is the level at which the entire analytical system gives recognizable mass spectra and acceptable calibration points, i.e., the point at which the method can reliably quantify the amount of pollutant in the sample. States can use their own procedures to average and otherwise account for monitoring data, *e.g.*, quantifying results below the ML. These results can then be used to assess compliance with WQBELs. (See 40 CFR part 132, Appendix F, Procedure 8.B.) This approach is applicable to priority toxic pollutants with criteria less than current detection limits. EPA's guidance explains that standard analytical methods may be used for purposes of assessing compliance with permit limits, but not for purposes of establishing water quality criteria or permit limits. Under the CWA, analytical methods are appropriately used in connection with NPDES permit limit compliance assessments. Because of the function of water quality criteria, EPA has not considered the sensitivity of analytical methods in deriving the criteria promulgated today.

EPA has promulgated 40 CFR 131.38(c)(3) to determine when freshwater or saltwater aquatic life criteria apply. This provision incorporates a time parameter to better define the critical condition. The structure of the paragraph is to establish

applicable rules and to allow for site-specific exceptions where the rules are not consistent with actual field conditions. Because a distinct separation generally does not exist between freshwater and saltwater aquatic communities, EPA is establishing the following: (1) The freshwater criteria apply at salinities of 1 part per thousand and below at locations where this occurs 95% or more of the time; (2) saltwater criteria apply at salinities of 10 parts per thousand and above at locations where this occurs 95% more of the time; and (3) at salinities between 1 and 10 parts per thousand the more stringent of the two apply unless EPA approves the application of the freshwater or saltwater criteria based on an appropriate biological assessment. The percentiles included here were selected to minimize the chance of overlap, that is, one site meeting both criteria. Determination of these percentiles can be done by any reasonable means such as interpolation between points with measured data or by the application of calibrated and verified mathematical models (or hydraulic models). It is not EPA's intent to require actual data collection at particular locations.

In the brackish water transition zones of estuaries with varying salinities, there generally will be a mix of freshwater and saltwater species. Generally, therefore, it is reasonable for the more stringent of the freshwater or saltwater criteria to apply. In evaluating appropriate data supporting the alternative set of criteria, EPA will focus on the species composition as its preferred method. This assignment of criteria for fresh, brackish and salt waters was developed in consultation with EPA's research laboratories at Duluth, Minnesota and Narragansett, Rhode Island. The Agency believes such an approach is consistent with field experience.

Paragraph (d) in 40 CFR 131.38 lists the designated water and use classifications for which the criteria apply. The criteria are applied to the beneficial use designations adopted by the State of California; EPA has not promulgated any new use classifications in this rule.

Exceedences Frequency: In a water quality criterion for aquatic life, EPA recommends an allowable frequency for excursions of the criteria. See 1985 Guidelines, pages 11–13. This allowable frequency provides an appropriate period of time during which the aquatic community can recover from the effect of an excursion and then function normally for a period of time before the next excursion. An excursion is defined as an occurrence of when the average concentration over the duration of the averaging period is above the CCC or the CMC. As ecological communities are naturally subjected to a series of stresses, the allowable frequency of pollutant stress may be set at a value that does not significantly increase the frequency or severity of all stresses combined. See also TSD, Appendix D. In addition, providing an allowable frequency for exceeding the criterion recognizes that it is not generally possible to assure that criteria are never exceeded. (TSD, page 36.)

Based on the available data, today's rule requires that the acute criterion for a pollutant be exceeded no more than once in three years on the average. EPA is also requiring that the chronic criterion for a pollutant be exceeded no more than once in three years on the average. EPA acknowledges that States may develop allowable frequencies that differ from these allowable frequencies, so long as they are scientifically supportable, but believes that these allowable frequencies are protective of the designated uses where EPA is promulgating criteria.

The use of aquatic life criteria for developing water quality-based effluent limits in permits requires the permitting official to use an appropriate wasteload allocation model. (TSD, Appendix D–6.) As discussed above, there are generally two methods for determining design flows, the hydrologically-based method and the biologically-based method.

The biologically-based method directly uses the averaging periods and frequencies specified in the aquatic life criteria for determining design flows. (TSD, Appendix. D–8.) Because the biologically-based method calculates the design flow directly from the duration and allowable frequency, it most accurately provides the allowed number of excursions. The hydrologically based method applies the CMC at a design flow equal to or equivalent to the 1Q10 design flow (i.e., the lowest one-day flow with an average recurrence frequency of once in ten years), and applies the CCC at the 7Q10 design flow (i.e., the lowest average seven consecutive day flow with a recurrence frequency of once in ten years).

EPA established a three year allowable frequency in the NTR. In settlement of the litigation on the NTR, EPA stated that it was in the midst of conducting, sponsoring, or planning research aimed at addressing scientific issues related to the basis for and application of water quality criteria and mentioned the issue of allowable frequency. See Partial Settlement Agreement in *American Forest and Paper Ass'n, Inc. et al.* v. *U.S. EPA* (Consolidated Case No. 93–0694 (RMU) D.D.C. To that end, EPA is reevaluating issues raised about allowable frequency as part of its work in revising the 1985 Guidelines.

EPA recognizes that additional data concerning (a) the probable frequency of lethal events for an assemblage of taxa covering a range of sensitivities to pollutants, (b) the probable frequency of sublethal effects for such taxa, (c) the differing effects of lethal and sublethal events in reducing populations of such taxa, and (d) the time needed to replace organisms lost as a result of toxicity, may lead to further refinement of the allowable frequency value. EPA has not yet completed this work. Until this work is complete, EPA believes that where EPA promulgates criteria, the three year allowable frequency represents a value in the reasonable range for this parameter.

3. Implementation

Once the applicable designated uses and water quality criteria for a water body are determined, under the National Pollutant Discharge Elimination System (NPDES) program discharges to the water body must be characterized and the permitting authority must determine the need for permit limits. If a discharge causes, has the reasonable potential to cause, or contributes to an excursion of a numeric or narrative water quality criteria, the permitting authority must develop permit limits as necessary to meet water quality standards. These permit limits are water quality-based effluent limitations or WQBELs. The terms "cause," "reasonable potential to cause," and "contribute to" are the terms in the NPDES regulations for conditions under which water quality-based permit limits are required. See 40 CFR 122.44(d)(1).

Since the publication of the proposed CTR, the State of California adopted procedures which detail how water quality criteria will be implemented through NPDES permits, waste discharge requirements, and other regulatory approaches. These procedures entitled, *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* were adopted on March 2, 2000. Once these procedures are submitted for review under CWA section 303(c), EPA will review them as they relate to water quality standards, and approve or disapprove them.

Several commenters understood the language in the preamble to the proposed rule regarding implementation

to mean that site-specific criteria, variances, and other actions would be prohibited or severely limited by the CTR. Site-specific criteria, variances and other actions modifying criteria are neither prohibited nor limited by the CTR. The State, if it so chooses, still can make these changes to its water quality standards, subject to EPA approval. However, with this Federal rule in effect, the State cannot implement any modifications that are less stringent than the CTR without an amendment to the CTR to reflect these modifications. EPA will make every effort to expeditiously accommodate Federal rulemaking of appropriate modifications to California's water quality standards. In the preamble to the proposed CTR, and here today, EPA is emphasizing that these efforts to amend the CTR on a case-by-case basis will generally increase the time before a modification can be implemented.

4. Wet Weather Flows

EPA has for a longtime maintained that CWA section 301(b)(1)(C) applies to NPDES permits for discharges from municipal separate storm sewer systems. Recently, the U.S. Court of Appeals for the Ninth Circuit upheld NPDES permits issued by EPA for five Arizona municipal separate storm sewer systems and addressed this issue specifically. *Defenders of Wildlife, et al.* v. *Browner,* No. 98–71080 (9th Cir., October 1999). The Court held that the CWA does not require "strict compliance" with State water quality standards for municipal storm sewer permits under section 301(b)(1)(C), but that at the same time, the CWA does give EPA discretion to incorporate appropriate water quality-based effluent limitations under another provision, CWA section 402(p)(3)(B)(iii).

The Court based its decision on the structure of section 402(p)(3), which contains distinct language for discharges of industrial storm water and municipal storm water. In section 402(p)(3)(A), Congress requires that "dischargers associated with industrial activity shall meet all applicable provisions of [section 402] and section [301]." 33 U.S.C. section 1342(p)(3)(A). The Court noted, therefore, that by incorporation, industrial storm water discharges need to achieve "any more stringent limitation, including those necessary to meet water quality standards * * *" The Court explained that industrial storm water discharges "must comply strictly with State water quality standards" but that Congress chose not to include a similar provision for municipal storm sewer discharges, including instead a requirement for controls to reduce pollutants to the maximum extent practicable or MEP standard in section 402(p)(3)(B). Reading the two related sections together, the Court concluded that section 402(p)(3)(B)(iii) does not require "strict compliance" by municipal storm sewer discharges according to section 301(b)(1)(C). At the same time, however, the Court found that the language in CWA section 402(p)(3)(B)(iii) which states that permits for discharges from municipal storm sewers shall require "such other provisions as the Administrator of the state determines appropriate for the control of such pollutants" provides EPA with discretion to incorporate provisions lending to ultimate compliance with water quality standards.

EPA believes that compliance with water quality standards through the use of Best Management Practices (BMPs) is appropriate. EPA articulated its position on the use of BMPs in storm water permits in the policy memorandum entitled, "Interim Permitting Approach for Water Quality-Based Effluent Limitations In Storm Water Permits" which was signed by the Assistant Administrator for Water, Robert Perciasepe on August 1, 1996 (61 FR 43761, August 9, 1996). A copy of this memorandum is contained in the administrative record for today's rule. The policy affirms the use of BMPs as a means to attain water quality standards in municipal storm water permits, and embraces BMPs as an interim permitting approach.

The interim permitting approach uses BMPs in first-round storm water permits, and expanded or better-tailored BMPs in subsequent permits, where necessary, to provide for the attainment of water quality standards. In cases where adequate information exists to develop more specific conditions or limitations to meet water quality standards, these conditions or limitations are to be incorporated into storm water permits, as necessary and appropriate.

This interim permitting approach, however, only applies to EPA. EPA encourages the State to adopt a similar policy for municipal storm water permits. This interim permitting approach provides time, where necessary, to more fully assess the range of issues and possible options for the control of storm water discharges for the protection of water quality. More information on this issue is included in the response to comment document in response to specific storm water issues raised by commenters.

5. Schedules of Compliance

A compliance schedule refers to an enforceable sequence of interim requirements in a permit leading to ultimate compliance with water quality-based effluent limitations or WQBELs in accordance with the CWA. The authorizing compliance schedule provision authorizes, but does not require, the permit issuing authority in the State of California to include such compliance schedules in permits under appropriate circumstances. The State of California is authorized to administer the National Pollutant Discharge Elimination System (NPDES) program and may exercise its discretion when deciding if a compliance schedule is justified because of the technical or financial (or other) infeasibility of immediate compliance. An authorizing compliance schedule provision is included in today's rule because of the potential for existing dischargers to have new or more stringent effluent limitations for which immediate compliance would not be possible or practicable.

New and Existing Dischargers: The provision allows compliance schedules only for an "existing discharger" which is defined as any discharger which is not a "new California discharger." A "new California discharger" includes "any building, structure, facility, or installation from which there is, or may be, a 'discharge of pollutants', the construction of which commences after the effective date of this regulation." These definitions are modeled after the existing 40 CFR 122.2 definitions for parallel terms, but with a cut-off date modified to reflect this rule. Only "new California dischargers" are required to comply immediately upon commencement of discharge with effluent limitations derived from the criteria in this rule. For "existing dischargers" whose permits are reissued or modified to contain new or more stringent limitations based upon certain water quality requirements, the permit could allow up to five years, or up to the length of a permit, to comply with such limitations. The provision applies to new or more stringent effluent limitations based on the criteria in this EPA rule.

EPA has included "increasing dischargers" within the category of "existing dischargers" since "increasing dischargers" are existing facilities with a change—an increase—in their discharge. Such facilities may include those with seasonal variations. "Increasing dischargers" will already have treatment systems in place for their current discharge, thus, they have less

opportunity than a new discharger does to design and build a new treatment system which will meet new water quality-based requirements for their changed discharge. Allowing existing facilities with an increasing discharge a compliance schedule will avoid placing the discharger at a competitive disadvantage vis-a-vis other existing dischargers who are eligible for compliance schedules.

Today's rule does not prohibit the use of a short-term "shake down period" for new California dischargers as is provided for new sources or new dischargers in 40 CFR 122.29(d)(4). These regulations require that the owner or operator of (1) a new source; (2) a new discharger (as defined in 40 CFR 122.2) which commenced discharge after August 13, 1979; or (3) a recommencing discharger shall install and implement all pollution control equipment to meet the conditions of the permit before discharging. The facility must also meet all permit conditions in the shortest feasible time (not to exceed 90 days). This shake-down period is not a compliance schedule. This approach may be used to address violations which may occur during a new facility's start-up, especially where permit limits are water quality-based and biological treatment is involved.

The burden of proof to show the necessity of a compliance schedule is on the discharger, and the discharger must request approval from the permit issuing authority for a schedule of compliance. The discharger should submit a description of the minimum required actions or evaluations that must be undertaken in order to comply with the new or more restrictive discharge limits. Dates of completion for the required actions or evaluations should be included, and the proposed schedule should reflect the shortest practicable time to complete all minimum required actions.

Duration of Compliance Schedules: Today's rule provides that compliance schedules may provide for up to five years to meet new or more stringent effluent limitations in those limited circumstances where the permittee can demonstrate to the permit authority that an extended schedule is warranted. EPA's regulations at 122.47 require compliance with standards as soon as possible. This means that permit authorities should not allow compliance schedules where the permittee fails to demonstrate their necessity. This provision should not be considered a default compliance schedule duration for existing facilities.

In instances where dischargers wish to conduct toxicological studies, analyze results, and adopt and implement new or revised water quality-based effluent limitations, EPA believes that five years is sufficient time within which to complete this process. See the preamble to the proposed rule.

Under this rule, where a schedule of compliance exceeds one year, interim requirements are to be specified and interim progress reports are to be submitted at least annually to the permit issuing authority, in at least one-year time intervals.

The rule allows all compliance schedules to extend up to a maximum duration of five years, which is the maximum term of any NPDES permit. See 40 CFR 122.46. The discharger's opportunity to obtain a compliance schedule occurs when the existing permit for that discharge is issued, reissued or modified to contain more stringent limits based on the water quality criteria in today's rule. Such compliance schedules, however, cannot be extended to any indefinite point of time in the future because the compliance schedule provision in this rule will sunset on May 18, 2005. The sunset applies to the authorizing provision in today's rule (40 CFR 131.38(e)), not to individual schedules of compliance included in specific NPDES permits. Delays in reissuing expired permits (including those which continue in effect under applicable NPDES regulations) cannot indefinitely extend the period of time during which a compliance schedule is in effect. This would occur where the permit authority includes the single maximum five-year compliance schedule in a permit that is reissued just before the compliance schedule provision sunsets (having been previously issued without WQBELS using the rule's criteria on the eve of the effective date of this rule). Instead, the effect of the sunset provision is to limit the longest time period for compliance to ten years after the effective date of this rule.

EPA recognizes that where a permit is modified during the permit term, and the permittee needs the full five years to comply, the five-year schedule may extend beyond the term of the modified permit. In such cases, the rule allows for the modified permit to contain a compliance schedule with an interim limit by the end of the permit term. When the permit is reissued, the permit authority may extend the compliance schedule in the next permit, provided that, taking into account the amount of time allowed under the previous permit, the entire compliance schedule contained in the permit shall not exceed five years. Final permit limits and compliance dates will be included in the record for the permit. Final compliance dates must occur within five years from the date of permit issuance, reissuance, or modification, unless additional or less time is provided for by law.

EPA would prefer that the State adopt an authorizing compliance schedule provision but recognizes that the State may not be able to complete this action for some time after promulgation of the CTR. Thus, EPA has chosen to promulgate the rule with a sunset provision which states that the authorizing compliance schedule provision will cease or sunset on May 18, 2005. However, if the State Board adopts, and EPA approves, a statewide authorizing compliance schedule provision significantly prior to May 18, 2005, EPA will act to stay the authorizing compliance schedule provision in today's rule. Additionally, if a Regional Board adopts, and the State Board adopts and EPA approves, a Regional Board authorizing compliance schedule provision, EPA will act to stay today's provision for the appropriate or corresponding geographic region in California. At that time, the State Board's or Regional Board's authorizing compliance schedule provision will govern the ability of the State regulatory entity to allow a discharger to include a compliance schedule in a discharger's NPDES permit.

Antibacksliding: EPA wishes to address the potential concern over antibacksliding where revised permit limits based on new information are the result of the completion of additional studies. The Agency's interpretation of the CWA is that the antibacksliding requirements of section 402(o) of the CWA do not apply to revisions to effluent limitations made before the scheduled date of compliance for those limitations.

State Compliance Schedule Provisions: EPA supports the State in adopting a statewide provision independent of or as part of the effort to readopt statewide water quality control plans, or in adopting individual basin-wide compliance schedule provisions through its nine Regional Water Quality Control Boards (RWQCBs). The State and RWQCBs have broad discretion to adopt a provision, including discretion on reasonable lengths of time for final compliance with WQBELs. EPA recognizes that practical time frames within which to set interim goals may be necessary to achieve meaningful, long-term improvements in water quality in California.

At this time, two RWQCBs have adopted an authorizing compliance schedule provision as an amendment to

their respective Basin Plans during the Boards' last triennial review process. The Basin Plans have been adopted by the State and have come to EPA for approval. Thus, the Basin Plans' provisions are effective for the respective Basins. If and when EPA approves of either Regional Basin Plan, EPA will expeditiously act to amend the CTR, staying its compliance schedule provision, for the appropriate geographic region.

6. Changes From Proposed Rule

A few changes were made in the final rule from the proposal both as a result of the Agency's consideration of issues raised in public comments and Endangered Species Act consultation with the U.S. Fish and Wildlife Service (FWS) and U.S. National Marine Fisheries Service (NMFS). The important changes include: reserving the mercury aquatic life criteria; reserving the selenium freshwater acute aquatic life criterion; reserving the chloroform human health criteria; and adding a sunset provision to the authorizing compliance schedule provision. EPA also clarified that the CTR will not replace priority toxic pollutant criteria which were adopted by the San Francisco Regional Water Quality Control Board in its 1986 Basin Plan, adopted by the State Board, and approved by EPA; specifying the harmonic mean for human health criteria for non-carcinogens and adding a provision which explicitly allows the State to adopt and implement an alternative averaging period, frequency, and design flow for a criterion after opportunity for public comment.

The first two changes, the reservation of mercury criteria and selenium criterion, are discussed in more detail below in Section L., The Endangered Species Act (ESA). The selenium criterion is also discussed in more detail above in Section E., Derivation of Criteria, in subsection 2.b., Freshwater Acute Selenium Criterion. EPA has also decided to reserve a decision on numeric criteria for chloroform and therefore not promulgate chloroform criteria in the final rule. As part of a large-scale regulation promulgated in December 1998 under the Safe Drinking Water Act, EPA published a health-based goal for chloroform (the maximum contaminant level goal or MCLG) of zero, see 63 FR 69390, Dec. 16, 1998. EPA provided new data and analyses concerning chloroform for public review and comment, including a different, mode of action approach for estimating the cancer risk, 63 FR 15674, March 31, 1998, but did not reach a conclusion on how to use that new information in establishing the final MCLG, pending further review by the Science Advisory Board. EPA has now concluded that any further actions on water quality criteria should take into account the new data and analysis as reviewed by the SAB. This decision is consistent with a recent federal court decision vacating the MCLG for chloroform (*Chlorine Chemistry Council v. EPA*, No. 98–1627 (DC Cir., Mar. 31,2000)). EPA intends to reassess the human health 304(a) criteria recommendation for chloroform. For these reasons, EPA has decided to reserve a decision on numeric criteria for chloroform in the CTR and not promulgate water quality criteria as proposed. Permitting authorities in California should continue to rely on existing narrative criteria to establish effluent limitations as necessary for chloroform.

The sunset provision for the authorizing compliance schedule provision has been added to ease the transition from a Federal provision to the State's provision that was adopted in March 2000 as part of its' new statewide implementation plan. The sunset provision is discussed in more detail in Section G.5 of today's preamble. The CTR matrix at 40 CFR 131.38(b)(1) makes it explicit that the rule does not supplant priority toxic pollutant criteria which were adopted by the San Francisco Regional Water Quality Control Board in its 1986 Basin Plan, adopted by the State Board, and approved by EPA. This change is discussed more fully in Section D.4. of today's preamble. EPA modified the design flow for implementing human health criteria for non-carcinogens from a 30Q5 to a harmonic mean. Human health criteria for non-carcinogens are based on an RfD, which is an acceptable daily exposure over a lifetime. EPA matched the criteria for protection over a human lifetime with the longest stream flow averaging period, i.e., the harmonic mean. Lastly, the CTR now contains language which is intended to make it easier for the State to adopt and implement an alternative averaging period, frequency and related design flow, for situations where the default parameters are inappropriate. This language is found at 40 CFR 131.38(c)(2)(iv).

H. Economic Analysis

This final rule establishes ambient water quality criteria which, by themselves, do not directly impose economic impacts (see section K). These criteria combined with the State-adopted designated uses for inland surface waters, enclosed bays and estuaries, and implementation policies, will establish water quality standards. Until the State implements these water quality standards, there will be no effect of this rule on any entity. The State will implement these criteria by ensuring that NPDES permits result in discharges that will meet these criteria. In so doing, the State will have considerable discretion.

EPA has analyzed the indirect potential costs and benefits of this rule. In order to estimate the indirect costs and benefits of the rule, an appropriate baseline must be established. The baseline is the starting point for measuring incremental costs and benefits of a regulation. The baseline is established by assessing what would occur in the absence of the regulation. At present, State Basin Plans contain a narrative water quality criterion stating that all waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. EPA's regulation at 40 CFR 122.44(d)(1)(vi) requires that where a discharge causes or has the reasonable potential to cause an excursion above a narrative criterion within a State water quality standard, the permitting authority must establish effluent limits but may determine limits using a number of options. These options include establishing "effluent limits on a case-by-case basis, using EPA's water quality criteria published under section 304(a) of the CWA, supplemented where necessary by other relevant information" (40 CFR 122.44(d)(1)(vi)(B)). Thus, to the extent that the State is implementing its narrative criteria by applying the CWA section 304(a) criteria, this rule does not impose any incremental costs because the criteria in this rule are identical to the CWA section 304(a) criteria. Alternatively, to the extent that the State is implementing its narrative criteria on a "case-by-case basis" using "other relevant information" in its permits this rule may impose incremental indirect costs because the criteria in these permits may not be based on CWA 304(a) criteria. Both of these approaches to establishing effluent limits are in full compliance with the CWA.

Because a specific basis for effluent limits in all existing permits in California is not known, it is not possible to determine a precise estimate of the indirect costs of this rule. The incremental costs of the rule may be as low as zero, or as high as $61 million. The high estimate of costs is based on the possibility that most of the effluent limits now in effect are not based on 304(a) criteria. EPA evaluated these

indirect costs using two different approaches. The first approach uses existing discharge data and makes assumptions about future State NPDES permit limits. Actual discharge levels are usually lower than the level set by current NPDES permit limits. This approach, representing the low-end scenario, also assumes that some of the discretionary mechanisms that would enhance flexibility (*e.g.*, site specific criteria, mixing zones) would be granted by the State. The second approach uses a sample of existing permit limits and assumes that dischargers are actually discharging at the levels contained in their permits and makes assumptions about limits statewide that would be required under the rule. This approach, representing the high-end scenario, also assumes that none of the discretionary mechanisms that would enhance flexibility (*e.g.*, site specific criteria, mixing zones) would be granted by the State. These two approaches recognize that the State has significant flexibility and discretion in how it chooses to implement standards within the NPDES permit program, the EA by necessity includes many assumptions about how the State will implement the water quality standards. These assumptions are based on a combination of EPA guidance and current permit conditions for the facilities examined in this analysis. To account for the uncertainty of EPA's implementation assumptions, this analysis estimates a wide range of costs and benefits. By completing the EA, EPA intends to inform the public about how entities might be potentially affected by State implementation of water quality standards in the NPDES permit program. The costs and benefits sections that follow summarize the methodology and results of the analysis.

1. Costs

EPA assessed the potential compliance costs that facilities may incur to meet permit limits based on the criteria in today's rule. The analysis focused on direct compliance costs such as capital costs and operation and maintenance costs (O&M) for end-of-pipe pollution control, indirect source controls, pollution prevention, monitoring, and costs of pursuing alternative methods of compliance.

The population of facilities with NPDES permits that discharge into California's enclosed bays, estuaries and inland surface waters includes 184 major dischargers and 1,057 minor dischargers. Of the 184 major facilities, 128 are publicly owned treatment works (POTWs) and 56 are industrial facilities. Approximately 2,144 indirect dischargers designated as significant industrial users discharge wastewater to those POTWs. In the EA for the proposed CTR, EPA used a three-phased process to select a sample of facilities to represent California dischargers potentially affected by the State's implementation of permit limits based on the criteria contained in this rule.

The first phase consisted of choosing three case study areas for which data was thought to exist. The three case studies with a total of 5 facilities included: the South San Francisco Bay (the San Jose/Santa Clara Water Pollution Control Plant and Sunnyvale Water Pollution Control Plant); the Sacramento River (the Sacramento Regional Wastewater Treatment Plant); and the Santa Ana River (the City of Riverside Water Quality Control Plant and the City of Colton Municipal Wastewater Treatment Facility). The second phase consisted of selecting five additional major industrial dischargers to complement the case-study POTWs.

The third phase involved selecting 10 additional facilities to improve the basis for extrapolating the costs of the selected sample facilities to the entire population of potentially affected dischargers. The additional 10 facilities were selected such that the group examined: (1) Was divided between major POTWs and major industrial discharger categories in proportion to the numbers of facilities in the State; (2) gave greater proportionate representation to major facilities than minor facilities based on a presumption that the majority of compliance costs would be incurred by major facilities; (3) gave a proportionate representation to each of four principal conventional treatment processes typically used by facilities in specified industries in California; and (4) was representative of the proportionate facilities located within the different California Regional Water Quality Control Boards. Within these constraints, facilities were selected at random to complete the sample.

In the EA for today's final rule, EPA primarily used the same sample as the EA for the proposed rule with some modifications. EPA increased the number of minor POTWs and minor industrial facilities in the sample. EPA randomly selected four new minor POTW facilities and five new minor industrial facilities to add to the sample. The number of sample facilities selected in each area under the jurisdiction of a Regional Water Quality Control Board was roughly proportional to the universe of facilities in each area.

For those facilities that were projected to exceed permit limits based on the criteria, EPA estimated the incremental costs of compliance. Using a decision matrix or flow chart, costs were developed for two different scenarios—a "low-end" cost scenario and a "high-end" cost scenario—to account for a range of regulatory flexibility available to the State when implementing permit limits based on the water quality criteria. The assumptions for baseline loadings also vary over the two scenarios. The low-end scenario generally assumed that facilities were discharging at the maximum effluent concentrations taken from actual monitoring data, while the high-end scenario generally assumed that facilities were discharging at their current effluent limits. The decision matrix specified assumptions used for selection of control options, such as optimization of existing treatment processes and operations, in-plant pollutant minimization and prevention, and end-of-pipe treatment.

The annualized potential costs that direct and indirect dischargers may incur as a result of State implementation of permit limits based on water quality standards using today's criteria are estimated to be between $33.5 million and $61 million. EPA believes that the costs incurred as a result of State implementation of these permit limits will approach the low-end of the cost range. Costs are unlikely to reach the high-end of the range because State authorities are likely to choose implementation options that provide some degree of flexibility or relief to point source dischargers. Furthermore, cost estimates for both scenarios, but especially for the high-end scenario, may be overstated because the analysis tended to use conservative assumptions in calculating these permit limits and in establishing baseline loadings. The baseline loadings for the high-end were based on current effluent limits rather than actual pollutant discharge data. Most facilities discharge pollutants in concentrations well below current effluent limits. In addition, both the high-end and low-end cost estimates in the EA may be slightly overstated since potential costs incurred to reduce chloroform discharges were included in these estimates. EPA made a decision to reserve the chloroform human health criteria after the EA was completed.

Under the low-end cost scenario, major industrial facilities and POTWs would incur about 27 percent of the potential costs, indirect dischargers would incur about 70 percent of the potential costs, while minor dischargers would incur about 3 percent. Of the major direct dischargers, POTWs would incur the largest share of projected costs (87 percent). However, distributed

among 128 major POTWs in the State, the average cost per plant would be $61,000 per year. Chemical and petroleum industries would incur the highest cost of the industrial categories (5.6 percent of the annual costs, with an annual average of $25,200 per plant). About 57 percent of the low-end costs would be associated with pollution prevention activities, while nearly 38 percent would be associated with pursuing alternative methods of compliance under the regulations.

Under the high-end cost scenario, major industrial facilities and POTWs would incur about 94 percent of the potential costs, indirect dischargers would incur about 17 percent of the potential costs, while minor dischargers would incur about 5 percent. Among the major, direct dischargers, two categories would incur the majority of potential costs—major POTWs (82 percent), Chemical/Petroleum Products (9 percent). The average annual per plant cost for different industry categories would ranges from zero to $324,000. The two highest average cost categories would be major POTWs ($324,000 per year) and Chemical/Petroleum Products ($221,264 per year). The shift in proportion of potential costs between direct and indirect dischargers is due to the assumption that more direct dischargers would use end-of-pipe treatment under the high-end scenario. Thus, a smaller proportion of indirect dischargers would be impacted under the high-end scenario, since some municipalities are projected to add end-of-pipe treatment which would reduce the need for controls from indirect discharges. Over 91 percent of the annual costs are for waste minimization and treatment optimization costs. Waste minimization would represent nearly 84% of the total annual costs. Capital and operation and maintenance costs would make up less than 9 percent of annual costs.

Cost-Effectiveness: Cost-effectiveness is estimated in terms of the cost of reducing the loadings of toxic pollutants from point sources. The cost-effectiveness is derived by dividing the projected annual costs of implementing permit limits based on water quality standards using today's criteria by the toxicity-weighted pounds (pound-equivalents) of pollutants removed. Pound-equivalents are calculated by multiplying pounds of each pollutant removed by the toxic weight (based on the toxicity of copper) for that pollutant.

Based on this analysis, State implementation of permit limits based on today's criteria would be responsible for the reduction of about 1.1 million to 2.7 million toxic pound-equivalents per year, or 15 to 50 percent of the toxic-weighted baseline loadings for the high- and low-end scenarios, respectively. The cost-effectiveness of the scenarios would range from $22 (high-end scenario) to $31 (low-end scenario) per pound-equivalent.

2. Benefits

The benefits analysis is intended to provide insight into both the types and potential magnitude of the economic benefits expected as a result of implementation of water quality standards based on today's criteria. To the extent feasible, empirical estimates of the potential magnitude of the benefits were developed and then compared to the estimated costs of implementing water quality standards based on today's criteria.

To perform a benefits analysis, the types or categories of benefits that apply need to be defined. EPA relied on a set of benefits categories that typically apply to changes in the water resource environment. Benefits were categorized as either use benefits or passive (nonuse) benefits depending on whether or not they involve direct use of, or contact with, the resource. The most prominent use benefit categories are those related to recreational fishing, boating, and swimming. Another use benefit category of significance is human health risk reduction. Human health risk reductions can be realized through actions that reduce human exposure to contaminants such as exposure through the consumption of fish containing elevated levels of pollutants. Passive use benefits are those improvements in environmental quality that are valued by individuals apart from any use of the resource in question.

Benefits estimates were derived in this study using an approach in which benefits of discrete large-scale changes in water quality beyond present day conditions were estimated wherever feasible. A share of those benefits was then apportioned to implementation of water quality standards based on today's criteria. The apportionment estimate was based on a three-stage process:

First, EPA assessed current total loadings from all sources that are contributing to the toxics-related water quality problems observed in the State. This defines the overall magnitude of loadings. Second, the share of total loadings that are attributable to sources that would be controlled through implementation of water quality standards based on today's criteria was estimated. Since this analysis was designed to focus only on those controls imposed on point sources, this stage of the process entailed estimating the portion of total loadings originating from point sources. Third, the percentage reduction in loadings expected due to implementation of today's criteria was estimated and then multiplied by the share of point source loadings to calculate the portion of benefits that could be attributed to implementation of water quality standards based on today's criteria.

Total monetized annual benefits were estimated in the range of $6.9 to $74.7 million. By category, annual benefits would be $1.3 to $4.6 million for avoided cancer risk, $2.2 to $15.2 million for recreational angling, and $3.4 to $54.9 million for passive use benefits.

There are numerous categories of potential or likely benefits that have been omitted from the quantified and monetized benefit estimates. In terms of potential magnitudes of benefit, the following are likely to be significant contributors to the underestimation of the monetized values presented above:

- Improvements in water-related (in-stream and near stream) recreation apart from fishing. The omission of potential motorized and nonmotorized boating, swimming, picnicking, and related in-stream and stream-side recreational activities from the benefits estimates could contribute to an appreciable underestimation of total benefits. Such recreational activities have been shown in empirical research to be highly valued, and even modest changes in participation and or user values could lead to sizable benefits statewide. Some of these activities can be closely associated with water quality attributes (notably, swimming). Other recreational activities may be less directly related to the water quality improvements, but might nonetheless increase due to their association with fishing, swimming, or other activities in which the participants might engage.
- Improvements in consumptive and nonconsumptive land-based recreation, such as hunting and wildlife observation. Improvements in aquatic habitats may lead (via food chain and related ecologic benefit mechanisms) to healthier, larger, and more diverse populations of avian and terrestrial species, such as waterfowl, eagles, and otters. Improvements in the populations for these species could manifest as improved hunting and wildlife viewing opportunities, which might in turn increase participation and user day values for such activities. Although the scope of the benefits analysis has not allowed a quantitative assessment of these values at either pre- or post-rule

conditions, it is conceivable that these benefits could be appreciable.

- Improvements in human health resulting from reduction of non-cancer risk. EPA estimated that implementation of water quality standards based on the criteria would result in a reduction of mercury concentrations in fish tissue and, thus, a reduction in the hazard from consumption of mercury contaminated fish. However, EPA was unable to monetize benefits due to reduced non-cancer health effects.
- Human health benefits for saltwater anglers outside of San Francisco Bay were not estimated. The number of saltwater anglers outside of San Francisco Bay is estimated to be 673,000 (based on Huppert, 1989, and U.S. FWS, 1993). The omission of other saltwater anglers may cause human health benefits to be underestimated. In addition, benefit estimates in the EA may be slightly overstated since potential benefits from reductions in chloroform discharges were included in these estimates. EPA made a decision to reserve the chloroform human health criteria after the EA was completed.

EPA received a number of comments which requested the Agency use the cost-benefit analysis in the EA as a factor in setting water quality criteria. EPA does not use the EA as a basis in determining protective water quality criteria. EPA's current regulations at 40 CFR 131.11 state that the criteria must be based on sound scientific rationale and must protect the designated use. From the outset of the water quality standards program, EPA has explained that while economic factors may be considered in designating uses, they may not be used to justify criteria that are not protective of those uses. 44 FR 25223–226, April 30, 1979. See e.g. *Mississippi Commission on Natural Resources* v. *Costle,* 625 F. 2d 1269, 1277 (5th Cir. 1980). EPA reiterated this interpretation of the CWA and its implementing regulations in discussing section 304(a) recommended criteria guidance stating that "they are based solely on data and scientific judgments on the relationship between pollutant concentrations and environmental and human health effects and do not reflect consideration of economic impacts or the technological feasibility of meeting the chemical concentrations in ambient water." 63 FR 36742 and 36762, July 7, 1998.

I. Executive Order 12866, Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), the Agency must determine whether the regulatory action is "significant" and therefore subject to Office of Management and Budget (OMB) review and the requirements of the Executive Order. The Order defines "significant regulatory action" as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another Agency;

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

It has been determined that this rule is not a "significant regulatory action" under the terms of Executive Order 12866 and is therefore not subject to OMB review.

J. Unfunded Mandates Reform Act of 1995

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104–4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures to State, local, and tribal governments, in the aggregate, or to the private sector, of $100 million or more in any one year. Before promulgating any regulation for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows an Agency to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government Agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of the affected small governments to have meaningful and timely input in the development of regulatory proposals with significant Federal intergovernmental mandates, and EPA informing, educating, and advising small governments on compliance with the regulatory requirements.

Today's rule contains no Federal mandates (under the regulatory provisions of Title II of the Unfunded Mandates Reform Act (UMRA)) for State, local, or tribal governments or the private sector. Today's rule imposes no enforceable duty on any State, local or Tribal governments or the private sector; rather, the CTR promulgates ambient water quality criteria which, when combined with State-adopted uses, will create water quality standards for those water bodies with adopted uses. The State will then use these resulting water quality standards in implementing its existing water quality control programs. Thus, today's rule is not subject to the requirements of sections 202 and 205 of the UMRA.

EPA has determined that this rule contains no regulatory requirements that might significantly or uniquely affect small governments. This rule establishes ambient water quality criteria which, by themselves do not directly impact any entity. The State will implement these criteria by ensuring that NPDES permits result in discharges that will meet these criteria. In so doing, the State will have considerable discretion. Until the State implements these water quality standards, there will be no effect of this rule on any entity. Thus, today's rule is not subject to the requirements of section 203 of UMRA.

K. Regulatory Flexibility Act

The Regulatory Flexibility Act generally requires Federal agencies to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the Agency certifies that the rule will not have a significant economic impact of a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions. For purposes of assessing the impacts of today's rule on small entities, small entity is defined as: (1) A small business according to RFA default definitions for small businesses (based on SBA size

standards); (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of today's final rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. This final rule will not impose any requirements on small entities.

Under the CWA water quality standards program, States must adopt water quality standards for their waters that must be submitted to EPA for approval. If the Agency disapproves a State standard and the State does not adopt appropriate revisions to address EPA's disapproval, EPA must promulgate standards consistent with the statutory requirements. EPA has authority to promulgate criteria or standards in any case where the Administrator determines that a revised or new standard is necessary to meet the requirements of the Act. These State standards (or EPA-promulgated standards) are implemented through various water quality control programs including the National Pollutant Discharge Elimination System (NPDES) program that limits discharges to navigable waters except in compliance with an EPA permit or permit issued under an approved State NPDES program. The CWA requires that all NPDES permits must include any limits on discharges that are necessary to meet State water quality standards.

Thus, under the CWA, EPA's promulgation of water quality criteria or standards establishes standards that the State, in turn, implements through the NPDES permit process. The State has considerable discretion in deciding how to meet the water quality standards and in developing discharge limits as needed to meet the standards. In circumstances where there is more than one discharger to a water body that is subject to water quality standards or criteria, a State also has discretion in deciding on the appropriate limits for the different dischargers. While the State's implementation of federally-promulgated water quality criteria or standards may result indirectly in new or revised discharge limits for small entities, the criteria or standards themselves do not apply to any discharger, including small entities.

Today's rule, as explained above, does not itself establish any requirements that are applicable to small entities. As a result of EPA's action here, the State of California will need to ensure that permits it issues include limits as necessary to meet the water quality standards established by the criteria in today's rule. In so doing, the State will have a number of discretionary choices associated with permit writing. While California's implementation of today's rule may ultimately result in some new or revised permit conditions for some dischargers, including small entities, EPA's action today does not impose any of these as yet unknown requirements on small entities.

The RFA requires analysis of the economic impact of a rule only on the small entities subject to the rule's requirements. Courts have consistently held that the RFA imposes no obligation on an Agency to prepare a small entity analysis of the effect of a rule on entities not regulated by the rule. *Motor & Equip. Mrfrs. Ass'n* v. *Nichols,* 142 F.3d 449, 467 & n.18 (D.C. Cir. 1998)(quoting *United States Distribution Companies* v. *FERC,* 88 F.3d 1105, 1170 (D.C. Cir. 1996); see also *American Trucking Association, Inc.* v. *EPA,* 175 F.3d 1027 (D.C. Cir. 1999). This final rule will have a direct effect only on the State of California which is not a small entity under the RFA. Thus, individual dischargers, including small entities, are not directly subject to the requirements of the rule. Moreover, because of California's discretion in implementing these standards, EPA cannot assess the extent to which the promulgation of this rule may subsequently affect any dischargers, including small entities. Consequently, certification under section 605(b) is appropriate. *State of Michigan, et al.* v. *U.S. Environmental Protection Agency,* No. 98–1497 (D.C. Cir. Mar. 3, 2000), slip op. at 41–42.

L. Paperwork Reduction Act

This action requires no new or additional information collection, reporting, or record keeping subject to the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.*

M. Endangered Species Act

Pursuant to section 7(a) of the Endangered Species Act (ESA), EPA has consulted with the U.S. Fish and Wildlife Service and the U.S. National Marine Fisheries Service (collectively, the Services) concerning EPA's rulemaking action for the State of California. EPA initiated informal consultation in early 1994, and completed formal consultation in April 2000. As a result of the consultation, EPA modified some of the provisions in the final rule.

As part of the consultation process, EPA submitted to the Services a Biological Evaluation for their review in October of 1997. This evaluation found that the proposed CTR was not likely to jeopardize the continued existence of any Federally listed species or result in the destruction or adverse modification of designated critical habitat. In April of 1998, the Services sent EPA a draft Biological Opinion which tentatively found that EPA's proposed rule would jeopardize the continued existence of several Federally listed species and result in the destruction or have adverse effect on designated critical habitat. After lengthy discussions with the Services, EPA agreed to several changes in the final rule and the Services in turn issued a final Biological Opinion finding that EPA's action would not likely jeopardize the continued existence of any Federally listed species or result in the destruction or adverse modification of designated critical habitat. EPA's Biological Evaluation and the Services' final Biological Opinion are contained in the administrative record for today's rule.

In order to ensure the continued protection of Federally listed threatened and endangered species and to protect their critical habitat, EPA agreed to reserve the aquatic life criteria for mercury and the acute freshwater aquatic life criterion for selenium. The Services believe that EPA's proposed criteria are not sufficiently protective of Federally listed species and should not be promulgated. EPA agreed that it would reevaluate these criteria in light of the Services concerns before promulgating them for the State of California. Other commitments made by EPA are described in a letter to the Services dated December 16, 1999; this letter is contained in the administrative record for today's rule.

N. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the Agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This rule is not a major rule as defined

by 5 U.S.C. 804(2). This rule will be effective May 18, 2000.

O. Executive Order 13084, Consultation and Coordination With Indian Tribal Governments

Under Executive Order 13084, EPA may not issue a regulation that is not required by statute, that significantly or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by the tribal governments, or EPA consults with those governments. If EPA complies by consulting, Executive Order 13084 requires EPA to provide to the Office of Management and Budget, in a separately identified section of the preamble to the rule, a description of the extent of EPA's prior consultation with representatives of affected tribal governments, a summary of the nature of their concerns, and a statement supporting the need to issue the regulation. In addition, Executive Order 13084 requires EPA to develop an effective process permitting elected officials and other representatives of Indian tribal governments "to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities."

Today's rule does not significantly or uniquely affect the communities of Indian tribal governments nor does it impose substantial direct compliance cots on them. Today's rule will only address priority toxic pollutant water quality criteria for the State of California and does not apply to waters in Indian country. Accordingly, the requirements of section 3(b) of Executive Order 13084 do not apply to this rule.

P. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 ("NTTAA"), Public Law No. 104–113, section 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

This final rule does not involve technical standards. Therefore, EPA did not consider the use of any voluntary consensus standards.

Q. Executive Order 13132 on Federalism

Executive Order 13132, entitled "Federalism" (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." "Policies that have federalism implications" is defined in the Executive Order to include regulations that have "substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government."

Under section 6 of Executive Order 13132, EPA may not issue a regulation that has federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, or EPA consults with State and local officials early in the process of developing the proposed regulation. EPA also may not issue a regulation that has federalism implications and that preempts State law, unless the Agency consults with State and local officials early in the process of developing the proposed regulation.

This final rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. The rule does not affect the nature of the relationship between EPA and States generally, for the rule only applies to water bodies in California. Further, the rule will not substantially affect the relationship of EPA and the State of California, or the distribution of power or responsibilities between EPA and the State. The rule does not alter the State's authority to issue NPDES permits or the State's considerable discretion in implementing these criteria. The rule simply implements Clean Water Act section 303(c)(2)(B) requiring numeric ambient water quality criteria for which EPA has issued section 304(a) recommended criteria in a manner that is consistent with previous regulatory guidance that the Agency has issued to implement CWA section 303(c)(2)(B). Further, this rule does not preclude the State from adopting water quality standards that meet the requirements of the CWA. Thus, the requirements of section 6 of the Executive Order do not apply to this rule.

Although section 6 of Executive Order 13132 does not apply to this rule, EPA did consult with State and local government representatives in developing this rule. EPA and the State reached an agreement that to best utilize its respective resources, EPA would promulgate water quality criteria and the State would concurrently work on a plan to implement the criteria. Since the proposal of this rule, EPA has kept State officials fully informed of changes to the proposal. EPA has continued to invite comment from the State on these changes. EPA believes that the final CTR incorporates comments from State officials and staff.

R. Executive Order 13045 on Protection of Children From Environmental Health Risks and Safety Risks

Executive Order 13045: "Protection of Children from Environmental Health Risks and Safety Risks" (62 FR 19885, April 23, 1997) applies to any rule that: (1) Is determined to be "economically significant" as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

While this final rule is not subject to the Executive Order because it is not economically significant as defined in Executive Order 12866, we nonetheless have reason to believe that the environmental health or safety risk addressed by this action may have a disproportionate effect on children. As a matter of EPA policy, we therefore have assessed the environmental health or safety effects of ambient water quality criteria on children. The results of this assessment are contained in section F.3., Human Health Criteria.

List of Subjects in 40 CFR Part 131

Environmental protection, Indians—lands, Intergovernmental relations, Reporting and recordkeeping requirements, Water pollution control.

Dated: April 27, 2000.

Carol Browner,

Administrator.

For the reasons set out in the preamble, part 131 of chapter I of title 40 of the Code of Federal Regulations is amended as follows:

PART 131—WATER QUALITY STANDARDS

1. The authority citation for part 131 continues to read as follows:

Authority: 33 U.S.C. 1251 *et seq.*

Subpart D—[Amended]

2. Section 131.38 is added to subpart D to read as follows:

§ 131.38 Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California.

(a) *Scope.* This section promulgates criteria for priority toxic pollutants in the State of California for inland surface waters and enclosed bays and estuaries. This section also contains a compliance schedule provision.

(b)(1) Criteria for Priority Toxic Pollutants in the State of California as described in the following table:

BILLING CODE 6560–50–P

A		B Freshwater		C Saltwater		D Human Health (10^{-6} risk for carcinogens) For consumption of:	
# Compound	CAS Number	Criterion Maximum Conc. [d] B1	Criterion Continuous Conc. [d] B2	Criterion Maximum Conc. [d] C1	Criterion Continuous Conc. [d] C2	Water & Organisms (μg/L) D1	Organisms Only (μg/L) D2
1. Antimony	7440360					14 a,s	4300 a,t
2. Arsenic [b]	7440382	340 i,m,w	150 i,m,w	69 i,m	36 i,m		
3. Beryllium	7440417					n	n
4. Cadmium [b]	7440439	4.3 e,i,m,w,x	2.2 e,i,m,w	42 i,m	9.3 i,m	n	n
5a. Chromium (III)	16065831	550 e,i,m,o	180 e,i,m,o			n	n
5b. Chromium (VI) [b]	18540299	16 i,m,w	11 i,m,w	1100 i,m	50 i,m	n	n
6. Copper [b]	7440508	13 e,i,m,w,x	9.0 e,i,m,w	4.8 i,m	3.1 i,m	1300	
7. Lead [b]	7439921	65 e,i,m	2.5 e,i,m	210 i,m	8.1 i,m	n	n
8. Mercury [b]	7439976	[Reserved]	[Reserved]	[Reserved]	[Reserved]	0.050 a	0.051 a
9. Nickel [b]	7440020	470 e,i,m,w	52 e,i,m,w	74 i,m	8.2 i,m	610 a	4600 a
10. Selenium [b]	7782492	[Reserved] p	5.0 q	290 i,m	71 i,m	n	n
11. Silver [b]	7440224	3.4 e,i,m		1.9 i,m			
12. Thallium	7440280					1.7 a,s	6.3 a,t
13. Zinc [b]	7440666	120 e,i,m,w,x	120 e,i,m,w	90 i,m	81 i,m		
14. Cyanide [b]	57125	22 o	5.2 o	1 r	1 r	700 a	220,000 a,j
15. Asbestos	1332214					7,000,000 fibers/L k,s	
16. 2,3,7,8-TCDD (Dioxin)	1746016					0.000000013 c	0.000000014 c
17. Acrolein	107028					320 s	780 t
18. Acrylonitrile	107131					0.059 a,c,s	0.66 a,c,t
19. Benzene	71432					1.2 a,c	71 a,c
20. Bromoform	75252					4.3 a,c	360 a,c
21. Carbon Tetrachloride	56235					0.25 a,c,s	4.4 a,c,t
22. Chlorobenzene	108907					680 a,s	21,000 a,j,t
23. Chlorodibromomethane	124481					0.401 a,c	34 a,c
24. Chloroethane	75003						
25. 2-Chloroethylvinyl Ether	110758						

26. Chloroform	67663					[Reserved]	[Reserved]
27. Dichlorobromomethane	75274					0.56 a,c	46 a,c
28. 1,1-Dichloroethane	75343						
29. 1,2-Dichloroethane	107062					0.38 a,c,s	99 a,c,t
30. 1,1-Dichloroethylene	75354					0.057 a,c,s	3.2 a,c,t
31. 1,2-Dichloropropane	78875					0.52 a	39 a
32. 1,3-Dichloropropylene	542756					10 a,s	1,700 a,t
33. Ethylbenzene	100414					3,100 a,s	29,000 a,t
34. Methyl Bromide	74839					48 a	4,000 a
35. Methyl Chloride	74873					n	n
36. Methylene Chloride	75092					4.7 a,c	1,600 a,c
37. 1,1,2,2-Tetrachloroethane	79345					0.17 a,c,s	11 a,c,t
38. Tetrachloroethylene	127184					0.8 c,s	8.85 c,t
39. Toluene	108883					6,800 a	200,000 a
40. 1,2-Trans-Dichloroethylene	156605					700 a	140,000 a
41. 1,1,1-Trichloroethane	71556					n	n
42. 1,1,2-Trichloroethane	79005					0.60 a,c,s	42 a,c,t
43. Trichloroethylene	79016					2.7 c,s	81 c,t
44. Vinyl Chloride	75014					2 c,s	525 c,t
45. 2-Chlorophenol	95578					120 a	400 a
46. 2,4-Dichlorophenol	120832					93 a,s	790 a,t
47. 2,4-Dimethylphenol	105679					540 a	2,300 a
48. 2-Methyl-4,6-Dinitrophenol	534521					13.4 s	765 t
49. 2,4-Dinitrophenol	51285					70 a,s	14,000 a,t
50. 2-Nitrophenol	88755						
51. 4-Nitrophenol	100027						
52. 3-Methyl-4-Chlorophenol	59507						
53. Pentachlorophenol	87865	19 f,w	15 f,w	13	7.9	0.28 a,c	8.2 a,c,j
54. Phenol	108952					21,000 a	4,600,000 a,j,t
55. 2,4,6-Trichlorophenol	88062					2.1 a,c	6.5 a,c
56. Acenaphthene	83329					1,200 a	2,700 a
57. Acenaphthylene	208968						
58. Anthracene	120127					9,600 a	110,000 a

59. Benzidine	92875					0.00012 a,c,s	0.00054 a,c,t
60. Benzo(a)Anthracene	56553					0.0044 a,c	0.049 a,c
61. Benzo(a)Pyrene	50328					0.0044 a,c	0.049 a,c
62. Benzo(b)Fluoranthene	205992					0.0044 a,c	0.049 a,c
63. Benzo(ghi)Perylene	191242						
64. Benzo(k)Fluoranthene	207089					0.0044 a,c	0.049 a,c
65. Bis(2-Chloroethoxy)Methane	111911						
66. Bis(2-Chloroethyl)Ether	111444					0.031 a,c,s	1.4 a,c,t
67. Bis(2-Chloroisopropyl)Ether	39638329					1,400 a	170,000 a,t
68. Bis(2-Ethylhexyl)Phthalate	117817					1.8 a,c,s	5.9 a,c,t
69. 4-Bromophenyl Phenyl Ether	101553						
70. Butylbenzyl Phthalate	85687					3,000 a	5,200 a
71. 2-Chloronaphthalene	91587					1,700 a	4,300 a
72. 4-Chlorophenyl Phenyl Ether	7005723						
73. Chrysene	218019					0.0044 a,c	0.049 a,c
74. Dibenzo(a,h)Anthracene	53703					0.0044 a,c	0.049 a,c
75. 1,2 Dichlorobenzene	95501					2,700 a	17,000 a
76. 1,3 Dichlorobenzene	541731					400	2,600
77. 1,4 Dichlorobenzene	106467					400	2,600
78. 3,3'-Dichlorobenzidine	91941					0.04 a,c,s	0.077 a,c,t
79. Diethyl Phthalate	84662					23,000 a,s	120,000 a,t
80. Dimethyl Phthalate	131113					313,000 s	2,900,000 t
81. Di-n-Butyl Phthalate	84742					2,700 a,s	12,000 a,t
82. 2,4-Dinitrotoluene	121142					0.11 c,s	9.1 c,t
83. 2,6-Dinitrotoluene	606202						
84 Di-n-Octyl Phthalate	117840						
85. 1,2-Diphenylhydrazine	122667					0.040 a,c,s	0.54 a,c,t
86. Fluoranthene	206440					300 a	370 a
87. Fluorene	86737					1,300 a	14,000 a
88. Hexachlorobenzene	118741					0.00075 a,c	0.00077 a,c
89. Hexachlorobutadiene	87683					0.44 a,c,s	50 a,c,t
90. Hexachlorocyclopentadiene	77474					240 a,s	17,000 a,j,t
91. Hexachloroethane	67721					1.9 a,c,s	8.9 a,c,t

92. Indeno(1,2,3-cd) Pyrene	193395					0.0044 a,c	0.049 a,c
93. Isophorone	78591					8.4 c,s	600 c,t
94. Naphthalene	91203						
95. Nitrobenzene	98953					17 a,s	1,900 a,j,t
96. N-Nitrosodimethylamine	62759					0.00069 a,c,s	8.1 a,c,t
97. N-Nitrosodi-n-Propylamine	621647					0.005 a	1.4 a
98. N-Nitrosodiphenylamine	86306					5.0 a,c,s	16 a,c,t
99. Phenanthrene	85018						
100. Pyrene	129000					960 a	11,000 a
101. 1,2,4-Trichlorobenzene	120821						
102. Aldrin	309002	3 g		1.3 g		0.00013 a,c	0.00014 a,c
103. alpha-BHC	319846					0.0039 a,c	0.013 a,c
104. beta-BHC	319857					0.014 a,c	0.046 a,c
105. gamma-BHC	58899	0.95 w		0.16 g		0.019 c	0.063 c
106. delta-BHC	319868						
107. Chlordane	57749	2.4 g	0.0043 g	0.09 g	0.004 g	0.00057 a,c	0.00059 a,c
108. 4,4'-DDT	50293	1.1 g	0.001 g	0.13 g	0.001 g	0.00059 a,c	0.00059 a,c
109. 4,4'-DDE	72559					0.00059 a,c	0.00059 a,c
110. 4,4'-DDD	72548					0.00083 a,c	0.00084 a,c
111. Dieldrin	60571	0.24 w	0.056 w	0.71 g	0.0019 g	0.00014 a,c	0.00014 a,c
112. alpha-Endosulfan	959988	0.22 g	0.056 g	0.034 g	0.0087 g	110 a	240 a
113. beta-Endosulfan	33213659	0.22 g	0.056 g	0.034 g	0.0087 g	110 a	240 a
114. Endosulfan Sulfate	1031078					110 a	240 a
115. Endrin	72208	0.086 w	0.036 w	0.037 g	0.0023 g	0.76 a	0.81 a,j
116. Endrin Aldehyde	7421934					0.76 a	0.81 a,j
117. Heptachlor	76448	0.52 g	0.0038 g	0.053 g	0.0036 g	0.00021 a,c	0.00021 a,c
118. Heptachlor Epoxide	1024573	0.52 g	0.0038 g	0.053 g	0.0036 g	0.00010 a,c	0.00011 a,c
119-125. Polychlorinated biphenyls (PCBs)			0.014 u		0.03 u	0.00017 c,v	0.00017 c,v
126. Toxaphene	8001352	0.73	0.0002	0.21	0.0002	0.00073 a,c	0.00075 a,c
Total Number of Criteria [h]		22	21	22	20	92	90

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Footnotes to Table in Parargraph (b)(1):

a. Criteria revised to reflect the Agency q1* or RfD, as contained in the Integrated Risk Information System (IRIS) as of October 1, 1996. The fish tissue bioconcentration factor (BCF) from the 1980 documents was retained in each case.

b. Criteria apply to California waters except for those waters subject to objectives in Tables III–2A and III–2B of the San Francisco Regional Water Quality Control Board's (SFRWQCB) 1986 Basin Plan, that were adopted by the SFRWQCB and the State Water Resources Control Board, approved by EPA, and which continue to apply.

c. Criteria are based on carcinogenicity of 10 (-6) risk.

d. Criteria Maximum Concentration (CMC) equals the highest concentration of a pollutant to which aquatic life can be exposed for a short period of time without deleterious effects. Criteria Continuous Concentration (CCC) equals the highest concentration of a pollutant to which aquatic life can be exposed for an extended period of time (4 days) without deleterious effects. ug/L equals micrograms per liter.

e. Freshwater aquatic life criteria for metals are expressed as a function of total hardness (mg/L) in the water body. The equations are provided in matrix at paragraph (b)(2) of this section. Values displayed above in the matrix correspond to a total hardness of 100 mg/l.

f. Freshwater aquatic life criteria for pentachlorophenol are expressed as a function of pH, and are calculated as follows: Values displayed above in the matrix correspond to a pH of 7.8. CMC = exp(1.005(pH) − 4.869). CCC = exp(1.005(pH) − 5.134).

g. This criterion is based on 304(a) aquatic life criterion issued in 1980, and was issued in one of the following documents: Aldrin/Dieldrin (EPA 440/5–80–019), Chlordane (EPA 440/5–80–027), DDT (EPA 440/5–80–038), Endosulfan (EPA 440/5–80–046), Endrin (EPA 440/5–80–047), Heptachlor (440/5–80–052), Hexachlorocyclohexane (EPA 440/5–80–054), Silver (EPA 440/5–80–071). The Minimum Data Requirements and derivation procedures were different in the 1980 Guidelines than in the 1985 Guidelines. For example, a "CMC" derived using the 1980 Guidelines was derived to be used as an instantaneous maximum. If assessment is to be done using an averaging period, the values given should be divided by 2 to obtain a value that is more comparable to a CMC derived using the 1985 Guidelines.

h. These totals simply sum the criteria in each column. For aquatic life, there are 23 priority toxic pollutants with some type of freshwater or saltwater, acute or chronic criteria. For human health, there are 92 priority toxic pollutants with either "water + organism" or "organism only" criteria. Note that these totals count chromium as one pollutant even though EPA has developed criteria based on two valence states. In the matrix, EPA has assigned numbers 5a and 5b to the criteria for chromium to reflect the fact that the list of 126 priority pollutants includes only a single listing for chromium.

i. Criteria for these metals are expressed as a function of the water-effect ratio, WER, as defined in paragraph (c) of this section. CMC = column B1 or C1 value x WER; CCC = column B2 or C2 value x WER.

j. No criterion for protection of human health from consumption of aquatic organisms (excluding water) was presented in the 1980 criteria document or in the 1986 Quality Criteria for Water. Nevertheless, sufficient information was presented in the 1980 document to allow a calculation of a criterion, even though the results of such a calculation were not shown in the document.

k. The CWA 304(a) criterion for asbestos is the MCL.

l. [Reserved]

m. These freshwater and saltwater criteria for metals are expressed in terms of the dissolved fraction of the metal in the water column. Criterion values were calculated by using EPA's Clean Water Act 304(a) guidance values (described in the total recoverable fraction) and then applying the conversion factors in § 131.36(b)(1) and (2).

n. EPA is not promulgating human health criteria for these contaminants. However, permit authorities should address these contaminants in NPDES permit actions using the State's existing narrative criteria for toxics.

o. These criteria were promulgated for specific waters in California in the National Toxics Rule ("NTR"), at § 131.36. The specific waters to which the NTR criteria apply include: Waters of the State defined as bays or estuaries and waters of the State defined as inland, i.e., all surface waters of the State not ocean waters. These waters specifically include the San Francisco Bay upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta. This section does not apply instead of the NTR for this criterion.

p. A criterion of 20 ug/l was promulgated for specific waters in California in the NTR and was promulgated in the total recoverable form. The specific waters to which the NTR criterion applies include: Waters of the San Francisco Bay upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta; and waters of Salt Slough, Mud Slough (north) and the San Joaquin River, Sack Dam to the mouth of the Merced River. This section does not apply instead of the NTR for this criterion. The State of California adopted and EPA approved a site specific criterion for the San Joaquin River, mouth of Merced to Vernalis; therefore, this section does not apply to these waters.

q. This criterion is expressed in the total recoverable form. This criterion was promulgated for specific waters in California in the NTR and was promulgated in the total recoverable form. The specific waters to which the NTR criterion applies include: Waters of the San Francisco Bay upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta; and waters of Salt Slough, Mud Slough (north) and the San Joaquin River, Sack Dam to Vernalis. This criterion does not apply instead of the NTR for these waters. This criterion applies to additional waters of the United States in the State of California pursuant to 40 CFR 131.38(c). The State of California adopted and EPA approved a site-specific criterion for the Grassland Water District, San Luis National Wildlife Refuge, and the Los Banos State Wildlife Refuge; therefore, this criterion does not apply to these waters.

r. These criteria were promulgated for specific waters in California in the NTR. The specific waters to which the NTR criteria apply include: Waters of the State defined as bays or estuaries including the San Francisco Bay upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta. This section does not apply instead of the NTR for these criteria.

s. These criteria were promulgated for specific waters in California in the NTR. The specific waters to which the NTR criteria apply include: Waters of the Sacramento-San Joaquin Delta and waters of the State defined as inland (*i.e.,* all surface waters of the State not bays or estuaries or ocean) that include a MUN use designation. This section does not apply instead of the NTR for these criteria.

t. These criteria were promulgated for specific waters in California in the NTR. The specific waters to which the NTR criteria apply include: Waters of the State defined as bays and estuaries including San Francisco Bay upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta; and waters of the State defined as inland (i.e., all surface waters of the State not bays or estuaries or ocean) without a MUN use designation. This section does not apply instead of the NTR for these criteria.

u. PCBs are a class of chemicals which include aroclors 1242, 1254, 1221, 1232, 1248, 1260, and 1016, CAS numbers 53469219, 11097691, 11104282, 11141165, 12672296, 11096825, and 12674112, respectively. The aquatic life criteria apply to the sum of this set of seven aroclors.

v. This criterion applies to total PCBs, e.g., the sum of all congener or isomer or homolog or aroclor analyses.

w. This criterion has been recalculated pursuant to the 1995 Updates: Water Quality Criteria Documents for the Protection of Aquatic Life in Ambient Water, Office of Water, EPA–820–B–96–001, September 1996. See also Great Lakes Water Quality Initiative Criteria Documents for the Protection of Aquatic Life in Ambient Water, Office of Water, EPA–80–B–95–004, March 1995.

x. The State of California has adopted and EPA has approved site specific criteria for the Sacramento River (and tributaries) above Hamilton City; therefore, these criteria do not apply to these waters.

General Notes to Table in Paragraph (b)(1)

1. The table in this paragraph (b)(1) lists all of EPA's priority toxic pollutants whether or not criteria guidance are available. Blank spaces indicate the absence of national section 304(a) criteria guidance. Because of variations in chemical nomenclature systems, this listing of toxic pollutants does not duplicate the listing in Appendix A to 40 CFR Part 423–126 Priority Pollutants. EPA has added the Chemical Abstracts Service (CAS) registry numbers, which provide a unique identification for each chemical.

2. The following chemicals have organoleptic-based criteria recommendations that are not included on this chart: zinc, 3-methyl-4-chlorophenol.

3. Freshwater and saltwater aquatic life criteria apply as specified in paragraph (c)(3) of this section.

(2) Factors for Calculating Metals Criteria. Final CMC and CCC values should be rounded to two significant figures.

(i) $CMC = WER \times (Acute\ Conversion\ Factor) \times (\exp\{m_A[\ln(hardness)]+b_A\})$

(ii) $CCC = WER \times (Acute\ Conversion\ Factor) \times (\exp\{m_C[\ln(hardness)]+b_C\})$

(iii) Table 1 to paragraph (b)(2) of this section:

Metal	m_A	b_A	m_C	b_C
Cadmium	1.128	−3.6867	0.7852	−2.715
Copper	0.9422	−1.700	0.8545	−1.702
Chromium (III)	0.8190	3.688	0.8190	1.561
Lead	1.273	−1.460	1.273	−4.705
Nickel	0.8460	2.255	0.8460	0.0584
Silver	1.72	−6.52		
Zinc	0.8473	0.884	0.8473	0.884

Note to Table 1: The term "exp" represents the base e exponential function.

(iv) Table 2 to paragraph (b)(2) of this section:

Metal	Conversion factor (CF) for freshwater acute criteria	CF for freshwater chronic criteria	CF for saltwater acute criteria	CF [a] for saltwater chronic criteria
Antimony	[d]	[d]	[d]	[d]
Arsenic	1.000	1.000	1.000	1.000
Beryllium	[d]	[d]	[d]	[d]
Cadmium	[b] 0.944	[b] 0.909	0.994	0.994
Chromium (III)	0.316	0.860	[d]	[d]
Chromium (VI)	0.982	0.962	0.993	0.993
Copper	0.960	0.960	0.83	0.83
Lead	[b] 0.791	[b] 0.791	0.951	0.951
Mercury	.....	.....	.....	.....
Nickel	0.998	0.997	0.990	0.990
Selenium	.....	[c]	0.998	0.998
Silver	0.85	[d]	0.85	[d]
Thallium	[d]	[d]	[d]	[d]
Zinc	0.978	0.986	0.946	0.946

Footnotes to Table 2 of Paragraph (b)(2):

[a] Conversion Factors for chronic marine criteria are not currently available. Conversion Factors for acute marine criteria have been used for both acute and chronic marine criteria.

[b] Conversion Factors for these pollutants in freshwater are hardness dependent. CFs are based on a hardness of 100 mg/l as calcium carbonate ($CaCO_3$). Other hardness can be used; CFs should be recalculated using the equations in table 3 to paragraph (b)(2) of this section.

[c] Bioaccumulative compound and inappropriate to adjust to percent dissolved.

[d] EPA has not published an aquatic life criterion value.

Note to Table 2 of Paragraph (b)(2): The term "Conversion Factor" represents the recommended conversion factor for converting a metal criterion expressed as the total recoverable fraction in the water column to a criterion expressed as the dissolved fraction in the water column. See "Office of Water Policy and Technical Guidance on Interpretation and Implementation of Aquatic Life Metals Criteria", October 1, 1993, by Martha G. Prothro, Acting Assistant Administrator for Water available from Water Resource Center, USEPA, Mailcode RC4100, M Street SW, Washington, DC, 20460 and the note to § 131.36(b)(1).

(v) Table 3 to paragraph (b)(2) of this section:

	Acute	Chronic
Cadmium	CF=1.136672—[(ln {hardness}) (0.041838)]	CF = 1.101672—[(ln {hardness})(0.041838)]
Lead	CF=1.46203—[(ln {hardness})(0.145712)]	CF = 1.46203—[(ln {hardness})(0.145712)]

(c) *Applicability.* (1) The criteria in paragraph (b) of this section apply to the State's designated uses cited in paragraph (d) of this section and apply concurrently with any criteria adopted by the State, except when State regulations contain criteria which are more stringent for a particular parameter and use, or except as provided in footnotes p, q, and x to the table in paragraph (b)(1) of this section.

(2) The criteria established in this section are subject to the State's general rules of applicability in the same way and to the same extent as are other Federally-adopted and State-adopted numeric toxics criteria when applied to the same use classifications including mixing zones, and low flow values below which numeric standards can be exceeded in flowing fresh waters.

(i) For all waters with mixing zone regulations or implementation procedures, the criteria apply at the appropriate locations within or at the boundary of the mixing zones; otherwise the criteria apply throughout the water body including at the point of discharge into the water body.

(ii) The State shall not use a low flow value below which numeric standards can be exceeded that is less stringent than the flows in Table 4 to paragraph (c)(2) of this section for streams and rivers.

(iii) Table 4 to paragraph (c)(2) of this section:

Criteria	Design flow
Aquatic Life Acute Criteria (CMC).	1 Q 10 or 1 B 3
Aquatic Life Chronic Criteria (CCC).	7 Q 10 or 4 B 3
Human Health Criteria.	Harmonic Mean Flow

Note to Table 4 of Paragraph (c)(2): 1. CMC (Criteria Maximum Concentration) is the water quality criteria to protect against acute effects in aquatic life and is the highest instream concentration of a priority toxic pollutant consisting of a short-term average not to be exceeded more than once every three years on the average.

2. CCC (Continuous Criteria Concentration) is the water quality criteria to protect against chronic effects in aquatic life and is the highest in stream concentration of a priority toxic pollutant consisting of a 4-day average not to be exceeded more than once every three years on the average.

3. 1 Q 10 is the lowest one day flow with an average recurrence frequency of once in 10 years determined hydrologically.

4. 1 B 3 is biologically based and indicates an allowable exceedence of once every 3 years. It is determined by EPA's computerized method (DFLOW model).

5. 7 Q 10 is the lowest average 7 consecutive day low flow with an average recurrence frequency of once in 10 years determined hydrologically.

6. 4 B 3 is biologically based and indicates an allowable exceedence for 4 consecutive days once every 3 years. It is determined by EPA's computerized method (DFLOW model).

(iv) If the State does not have such a low flow value below which numeric standards do not apply, then the criteria included in paragraph (d) of this section apply at all flows.

(v) If the CMC short-term averaging period, the CCC four-day averaging period, or once in three-year frequency is inappropriate for a criterion or the site to which a criterion applies, the State may apply to EPA for approval of an alternative averaging period, frequency, and related design flow. The State must submit to EPA the bases for any alternative averaging period, frequency, and related design flow. Before approving any change, EPA will publish for public comment, a document proposing the change.

(3) The freshwater and saltwater aquatic life criteria in the matrix in paragraph (b)(1) of this section apply as follows:

(i) For waters in which the salinity is equal to or less than 1 part per thousand 95% or more of the time, the applicable criteria are the freshwater criteria in Column B;

(ii) For waters in which the salinity is equal to or greater than 10 parts per thousand 95% or more of the time, the applicable criteria are the saltwater criteria in Column C except for selenium in the San Francisco Bay estuary where the applicable criteria are the freshwater criteria in Column B (refer to footnotes p and q to the table in paragraph (b)(1) of this section); and

(iii) For waters in which the salinity is between 1 and 10 parts per thousand as defined in paragraphs (c)(3)(i) and (ii) of this section, the applicable criteria are the more stringent of the freshwater or saltwater criteria. However, the Regional Administrator may approve the use of the alternative freshwater or saltwater criteria if scientifically defensible information and data demonstrate that on a site-specific basis the biology of the water body is dominated by freshwater aquatic life and that freshwater criteria are more appropriate; or conversely, the biology of the water body is dominated by saltwater aquatic life and that saltwater criteria are more appropriate. Before approving any change, EPA will publish for public comment a document proposing the change.

(4) *Application of metals criteria.* (i) For purposes of calculating freshwater aquatic life criteria for metals from the equations in paragraph (b)(2) of this section, for waters with a hardness of 400 mg/l or less as calcium carbonate, the actual ambient hardness of the surface water shall be used in those equations. For waters with a hardness of over 400 mg/l as calcium carbonate, a hardness of 400 mg/l as calcium carbonate shall be used with a default Water-Effect Ratio (WER) of 1, or the actual hardness of the ambient surface water shall be used with a WER. The same provisions apply for calculating the metals criteria for the comparisons provided for in paragraph (c)(3)(iii) of this section.

(ii) The hardness values used shall be consistent with the design discharge conditions established in paragraph (c)(2) of this section for design flows and mixing zones.

(iii) The criteria for metals (compounds #1—#13 in the table in paragraph (b)(1) of this section) are expressed as dissolved except where otherwise noted. For purposes of calculating aquatic life criteria for metals from the equations in footnote i to the table in paragraph (b)(1) of this section and the equations in paragraph (b)(2) of this section, the water effect ratio is generally computed as a specific pollutant's acute or chronic toxicity value measured in water from the site covered by the standard, divided by the respective acute or chronic toxicity value in laboratory dilution water. To use a water effect ratio other than the default of 1, the WER must be determined as set forth in Interim Guidance on Determination and Use of Water Effect Ratios, U.S. EPA Office of Water, EPA–823–B–94–001, February 1994, or alternatively, other scientifically defensible methods adopted by the State as part of its water quality standards program and approved by EPA. For calculation of criteria using site-specific values for both the hardness and the water effect ratio, the hardness used in the equations in paragraph (b)(2) of this section must be determined as required in paragraph (c)(4)(ii) of this section. Water hardness must be calculated from the measured calcium and magnesium ions present, and the ratio of calcium to magnesium should be approximately the same in standard laboratory toxicity testing water as in the site water.

(d)(1) Except as specified in paragraph (d)(3) of this section, all waters assigned any aquatic life or human health use classifications in the Water Quality Control Plans for the various Basins of the State ("Basin Plans") adopted by the California State Water Resources Control Board ("SWRCB"), except for ocean waters covered by the Water Quality Control Plan for Ocean Waters of California ("Ocean Plan") adopted by the SWRCB with resolution Number 90–27 on March 22, 1990, are subject to the criteria in paragraph (d)(2) of this section, without exception. These criteria apply to waters identified in the Basin Plans. More particularly, these criteria apply to waters identified in the Basin Plan chapters designating beneficial uses for waters within the region. Although the State has adopted several use designations for each of these waters, for purposes of this action, the specific standards to be applied in paragraph (d)(2) of this section are based on the presence in all waters of some aquatic life designation and the presence or absence of the MUN use designation (municipal and domestic supply). (See Basin Plans for more detailed use definitions.)

(2) The criteria from the table in paragraph (b)(1) of this section apply to the water and use classifications defined in paragraph (d)(1) of this section as follows:

Water and use classification	Applicable criteria
(i) All inland waters of the United States or enclosed bays and estuaries that are waters of the United States that include a MUN use designation.	(A) Columns B1 and B2—all pollutants (B) Columns C1 and C2—all pollutants (C) Column D1—all pollutants
(ii) All inland waters of the United States or enclosed bays and estuaries that are waters of the United States that do not include a MUN use designation.	(A) Columns B1 and B2—all pollutants (B) Columns C1 and C2—all pollutants (C) Column D2—all pollutants

(3) Nothing in this section is intended to apply instead of specific criteria, including specific criteria for the San Francisco Bay estuary, promulgated for California in the National Toxics Rule at § 131.36.

(4) The human health criteria shall be applied at the State-adopted 10 (−6) risk level.

(5) Nothing in this section applies to waters located in Indian Country.

(e)*Schedules of compliance.* (1) It is presumed that new and existing point source dischargers will promptly comply with any new or more restrictive water quality-based effluent limitations ("WQBELs") based on the water quality criteria set forth in this section.

(2) When a permit issued on or after May 18, 2000 to a new discharger contains a WQBEL based on water quality criteria set forth in paragraph (b) of this section, the permittee shall comply with such WQBEL upon the commencement of the discharge. A new discharger is defined as any building, structure, facility, or installation from which there is or may be a "discharge of pollutants" (as defined in 40 CFR 122.2) to the State of California's inland surface waters or enclosed bays and estuaries, the construction of which commences after May 18, 2000.

(3) Where an existing discharger reasonably believes that it will be infeasible to promptly comply with a new or more restrictive WQBEL based on the water quality criteria set forth in this section, the discharger may request approval from the permit issuing authority for a schedule of compliance.

(4) A compliance schedule shall require compliance with WQBELs based on water quality criteria set forth in paragraph (b) of this section as soon as possible, taking into account the dischargers' technical ability to achieve compliance with such WQBEL.

(5) If the schedule of compliance exceeds one year from the date of permit issuance, reissuance or modification, the schedule shall set forth interim requirements and dates for their achievement. The dates of completion between each requirement may not exceed one year. If the time necessary for completion of any requirement is more than one year and is not readily divisible into stages for completion, the permit shall require, at a minimum, specified dates for annual submission of progress reports on the status of interim requirements.

(6) In no event shall the permit issuing authority approve a schedule of compliance for a point source discharge which exceeds five years from the date of permit issuance, reissuance, or modification, whichever is sooner. Where shorter schedules of compliance are prescribed or schedules of compliance are prohibited by law, those provisions shall govern.

(7) If a schedule of compliance exceeds the term of a permit, interim permit limits effective during the permit shall be included in the permit and addressed in the permit's fact sheet or statement of basis. The administrative record for the permit shall reflect final permit limits and final compliance dates. Final compliance dates for final permit limits, which do not occur during the term of the permit, must occur within five years from the date of issuance, reissuance or modification of the permit which initiates the compliance schedule. Where shorter schedules of compliance are prescribed or schedules of compliance are prohibited by law, those provisions shall govern.

(8) The provisions in this paragraph (e), Schedules of compliance, shall expire on May 18, 2005.

[FR Doc. 00–11106 Filed 5–17–00; 8:45 am]
BILLING CODE 6560–50–P

EXHIBIT "14"

CALIFORNIA TOXICS RULE
RESPONSE TO COMMENTS REPORT

VOLUME I

December 1999

Prepared by:

U.S. Environmental Protection Agency
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Attachments? N
CROSS REFERENCES

Comment: MR. LEE: My name is Fred Lee, L-E-E.

I want to focus on one aspect of the discussions today, and that is the urban stormwater and highway stormwater runoff issues. These are of concern to me. I'm particularly concerned about this issue in applying these criteria to regulating stormwater runoff and the ultimate goal mandated by the Clean Water Act.

I have been involved in criteria and standards development since the 60s, I helped EPA develop its current approach as a peer reviewer for agencies for the so-called gold book criteria, which is still basically the approach being used today to promulgate these criteria.

There is no question, if you understand how the current criteria were developed, that they tend to significantly over regulate urban stormwater runoff. This will result in massive expenditures as we approach the goal of achieving water quality standards in stormwaters.

This is a well-known problem. Everyone knows this is a problem, but everybody says, "Well, apply BMPs for a while." And that's no man's land. what's that really mean and what's MEP mean and so forth?

When I looked at that rule, I said we really missed the boat by not discussing what it's going to cost to apply these criteria to urban stormwater as an ultimate goal where you have no measure for exceedence for five years. That's Clean Water Act requirements.

We've got to get these figures on the table and we've got to start to understand where we're heading for as a goal with respect to applying these criteria as ultimate goals for urban stormwater.

It's -- there may be situations it's 1 to 2 dollars per person per day in the regulated communities. That's the kind of cost we're talking about for achieving Clean Water Act requirements, with no more than one exceedence for constituents, as we've heard, such as copper and lead, zinc, et cetera -- 1 to 2 dollars per person.

We don't have lands to store this water in order to provide treatment, so it's -- to me, it's a matter for EPA as part of this rule to do a proper economic analysis of what it's going to cost the public actually to process ever-increasing BMPs until we get to the goal.

It's a serious mistake. We're talking about a massive bill for this country. And what are we going to get? We'll get a lot of over regulation because criteria are not applicable to this kind of situation.

We need different kind of criteria, and this has been well discussed; we understand that needs to be done obviously.

Response to: CTRH-001-061

EPA disagrees with the comments. See response to CTR-001-003. For a discussion of the scientific validity of CTR criteria, see response to CTR-031-004c. For a discussion of the relationship between criteria, standards, effluent limitations and implementation costs, see response to CTRH-002-006a. For a discussion of EPA's evaluation of studies concerning costs associated with achieving water quality

criteria for storm water discharges, see responses to CTR-013-003 and CTR-040-004.

Comment ID: CTRH-002-024
Comment Author: Gary Hildebrand
Document Type: Public Hearing
State of Origin: CA
Represented Org: L.A. Dept of Public Works
Document Date: 09/19/97
Subject Matter Code: I-03 Applicability of Criteria
References:
Attachments? N
CROSS REFERENCES

Comment: My name is Gary Hildebrand. I'm with the Los Angeles County Department of Public Works, and I'm the stormwater permit program manager for Los Angeles County. I'm here representing the principal permittee for the L.A. County Municipal Stormwater Permit Program which is the largest municipal stormwater permit program in the nation. We have over 86 permittee cities in our program. We cover over a 3,000-square-mile watershed which contains like 9 million people. We also have a 3,000-mile-plus urban storm drain network that permittees must maintain.

First, I'd like to express our support and agreement with the comments expressed at the public hearing yesterday in San Francisco by Mr. Bob Hale, the chairman of the California Stormwater Quality Task Force, and also the other municipal stormwater program representatives, both there and at the hearing today.

Then I would like to provide some additional comments that are concerned to our municipal stormwater program. First off, compliance with the proposed criteria for stormwater discharges may be impractical. The proposed criteria was established for typical steady flow point source discharges and are not applicable to the wet weather flows. Quantity of stormwater discharges, slow conditions and receding waters, the numerous discharge points and the variability in discharge quality, there is no published scientific approach to determine the compliance with water quality criteria for stormwater runoff from a municipal storm drain system. Until such an approach is accepted and published by a regulatory agency, it should not be applicable to municipal stormwater discharges.

Response to: CTRH-002-024

EPA disagrees with the comments. See response to CTR-001-003. For a discussion of the scientific validity of CTR criteria, see response to CTR-031-004c. For a discussion of the relationship between criteria, standards, effluent limitations and implementation costs, see response to CTRH-002-006a. For a discussion of EPA's evaluation of studies concerning costs associated with achieving water quality criteria for storm water discharges, see responses to CTR-013-003 and CTR-040-004.

Subject Matter Code: J Storm Water Economics

Comment ID: CTR-001-007
Comment Author: Law Offices of Alan C. Waltner
Document Type: Storm Water Auth.
State of Origin: CA
Represented Org: Almeda Cnty Clean Wtr Pgm
Document Date: 09/22/97
Subject Matter Code: J Storm Water Economics
References:
Attachments? N
CROSS REFERENCES

Comment: SIGNIFICANT ECONOMIC IMPACTS WOULD RESULT FROM THE APPLICATION OF WATER QUALITY STANDARDS AS NUMERIC EFFLUENT LIMITATIONS OR WASTELOAD ALLOCATIONS

If EPA intends that the WQS have a more direct effect on the permitting for MS4s, the implications are significant. in particular, the economic analysis supporting the proposed CTR would be dramatically incomplete. Massive expenditures would be required if storm water systems essentially were required to meet the same numerically based treatment standards as being considered for POTWs. The expenditures that would result from such an approach are being addressed in more detail in other MS4 comments, and will not be repeated here.

However, we note that the economic impact analysis that EPA prepared to support the proposed rule assumes that the regulation would have no economic impact on MS4s. (*11) If MS4s are subjected to NELs or WLAs as a result of the rule, significant economic impacts would result. Even if water quality based effluent limitations are based on BMPS, they would have an economic impact if they represent controls more extensive than the maximum extent practicable criteria of Section 402(p). EPA's economic analysis also provides no basis for estimating the costs to MS4s, since the "representative" dischargers analyzed in the economic analysis do not include any storm water systems. The economic analysis does not include these costs and it would be arbitrary to adopt a rule that would have these implications without considering those costs. (*12)

(*11) Likewise, the economic analysis supporting the State Implementation Policy excluded consideration of the costs to municipal storm water systems, on the theory that "the proposed Policy does not impose new regulatory requirements and, therefore, no additional costs are anticipated (i.e., . . . storm water . . .)" SIP at VIII-33. Elsewhere the SIP urges that: "The SWRCB is making no changes in the existing storm water program at the SWRCB and RWQCB. For these reasons, this cost analysis did not consider the storm water proposed Policy issue." Id. at VIII-43. These municipal costs were excluded even though the benefits calculations assumed that the proposed water quality standards would be achieved and that, with respect to San Francisco Bay, the share of toxic loadings attributable to nonpoint sources is estimated to range from 90% to 99% of the total. SIP at VIII-25. It is fundamental that "you can't get something for nothing" and the conflicting assumptions in the SIP, which parallel assumptions in the economic analysis of the CTR, are simply arbitrary.

(*12) Also, since EPA stands in the shoes of the state in adopting these criteria the action would violate the cost balancing elements of the Porter Cologne Act, as discussed below. At minimum, to the extent

that the rule creates an inflexible obligation to implement the criteria with respect to MS4s without complying with Porter Cologne Act requirements, it would set the State and Regional Boards on a collision course with those requirements at the Basin Plan and NPDES permitting phases.

Response to: CTR-001-007

EPA did not ascribe benefits or costs of controlling storm water discharges in the proposed or final Economic Analysis. EPA believes that many storm water dischargers can avoid violation of water quality standards through application of best management practices that are already required by current storm water permits. This conclusion is supported by EPA's analysis of the data submitted by several commenters (see response to CTR-040-004). EPA articulated its position on the use of BMPs in storm water permits in the Interim Permitting Approach for Water Quality Based Effluent Limitations in Storm Water Permits (61 FR 43761, August 19, 1996).

The commenter claims that even with the application of current BMPs, its storm water dischargers would still violate water quality standards due to the CTR criteria. The commenter appears to assume that the storm water discharge would be subject to numeric water quality based effluent limits which would be equivalent to the criteria values and applied as effluent limits never to be exceeded, or calculated in the same manner that effluent limits are calculated for other point sources, such as POTWs. The commenter then appears to assume that such WQBELs would then require the construction of very costly end-of-pipe controls.

EPA contends that neither scenario is valid with regards to developing WQBELs for storm water discharges or establishing compliance with WQBELs. EPA acknowledges that wet weather discharges are technically difficult to model and evaluate financially, because they are intermittent and highly variable. Wet weather discharges also occur under more diverse hydrologic or climatic conditions than continuous discharges from industrial or municipal facilities, which are evaluated under critical low flow or drought conditions. If the EPA had enough data to completely characterize all the conditions and do the necessary modelling, WQBELs would be developed using dynamic models to account for the intermittent loadings and exposures from the storm water discharges. In the absence of this data, EPA will continue to advocate the use of BMPs, as discussed in the CTR preamble. Therefore, EPA believes there is inadequate information at the current time to conclude whether the CTR will have any cost impact on storm water dischargers. Until that information is available, it is premature to project that storm water dischargers would be subject to strict numeric WQBELs and would incur any costs beyond those for which they are already legally responsible under the Clean Water Act. EPA will continue to work with the State to implement storm water permits that comply with water quality standards with an emphasis on pollution prevention and best management practices rather than costly end-of-pipe controls.

See also response to CTR-040-004.

EPA disagrees that the CTR must meet the requirements of the Porter Cologne Act. As a Federal agency, EPA is not subject to the requirements of the Porter-Cologne Act, which is State law. See also response to CTR-020-002 (Category C-21; Legal Issues).

Comment ID: CTR-013-003
Comment Author: County of Los Angeles
Document Type: Storm Water Auth.
State of Origin: CA

In its analysis, the USEPA appears to assume that a BMP program will lead to compliance and that there is no associated cost for a BMP Program (over and above what an MS4 has in place already). Studies conducted by the County of Sacramento and Fresno Metropolitan Flood Control district shows this to be incorrect, i.e., a BMP program cannot comply with the proposed criteria. Furthermore, these studies show that the cost for a BMP program is significant and would increase substantially if an MS4 was required to construct end-of-pipe treatment for compliance. The USEPA should not implement the proposed criteria to MS4 discharges until such time as an adequate economic analysis addressing the true impacts to MS4 dischargers is conducted and assessed.

Response to: CTR-014-003

See response to CTR-013-003.

Comment ID: CTR-014-004b
Comment Author: City of Lakewood
Document Type: Local Government
State of Origin: CA
Represented Org:
Document Date: 09/25/97
Subject Matter Code: J Storm Water Economics
References: Letter CTR-014 incorporates by reference letters CTR-013 and CTR-027

Attachments? N
CROSS REFERENCES R

Comment: 4. The proposed rule applies to all current and future MS4 dischargers, including small communities. These small communities will be significantly impacted by the proposed rule. In California, there are many small communities that are currently co-permittees to MS4 permits. Many of the larger municipalities in California have conducted stormwater discharge characterization studies. These studies have shown that there are common pollutants associated with stormwater discharges from urbanized areas that could result in compliance problems with the proposed criteria. Most small communities have not conducted discharge characterization studies; however, it is reasonable to assume that discharges from small communities would also contain these same pollutants. This would result in a smaller community being faced with the same compliance issues as large and medium municipalities; however, the cost to comply could be more significant and prohibitive for smaller communities.

The Regulatory Flexibility Act requires the USEPA to conduct an analysis on the economic impact the proposed rule may have on small entities, unless the USEPA certifies that the rule will not affect a significant number of small entities. In the preamble to the proposed rule(*1) it indicates that there are no small entities to be impacted by the rule, and, therefore, the USEPA did not need to complete an analysis required under the Act. The USEPA neglected to address small MS4 communities in California that are currently subject to a MS4 permits, and those smaller communities that may be impacted through Phase 11. The USEPA should have conducted an analysis on the economic impacts to smaller communities.

Unless the preamble is modified to indicate that MS4s are not required to comply with water quality standards, the proposed rule should not be applied to smaller MS4 communities until the USEPA has complied with the requirements of the Regulatory Flexibility Act.

EPA used the MDL as the compliance level. Although EPA used the pollutant MDL for costing purposes, the Agency acknowledges that estimating treatment costs for WQBELs below the MDL is speculative and likely unrealistic.

Finally, many of the commenters included costs related to installation of treatment for storm water discharges. As further described in the responses to CTR-021-008, CTR-013-003 and CTR-040-004, EPA believes that the final CTR will not significantly affect the current storm water program being implemented by the State, which includes the requirement to develop best management practices to control pollutants in storm water discharges. As such, EPA believes that inclusion of end-of-pipe treatment costs for storm water are inappropriate.

With respect to EPA's analysis of nonpoint source dischargers see response to CTR-034-014e.

Reference: SAIC. 1995. Assessment of Compliance Costs Resulting from Implementation of the Final Great Lakes Water Quality Guidance. Prepared for U.S. EPA, Office of Science and Technology, March 13.

Comment ID: CTR-036-002a
Comment Author: County of Orange
Document Type: Local Government
State of Origin: CA
Represented Org:
Document Date: 09/25/97
Subject Matter Code: J Storm Water Economics
References: Letter CTR-036 incorporates by reference letters CTR-013, CTR-018, CTR-031, CTR-034 and CTR-040
Attachments? N
CROSS REFERENCES E-01c

Comment: Cost to Implement the Proposed Rule

The inclusion of municipal stormwater discharges under the proposed rule renders the economic analysis invalid, noting municipal studies that show that stormwater discharges cannot comply with all of the proposed criteria with anything short of major national or regional product substitutions, or end-of-pipe treatment:

The Fresno Metropolitan Flood Control District conducted an attainability analysis on stormwater discharges from its urbanized area detention basins. The analysis showed that even with pollutant reductions in the basins, the proposed criteria would not be met.

The Sacramento Stormwater Program conducted an attainability analysis and found that even with an aggressive BMP program the urbanized area would not achieve certain of the water quality criteria, and that the cost of treatment would be on the order of $2 billion.

A preliminary attainability analysis conducted by Orange County, based on a limited dataset, indicates similar findings to Fresno and Sacramento in spite of the implementation of a significant BMP program over a multi-year period (see Attachment 2).

Comment ID: CTR-021-006b
Comment Author: LeBoeuf, Lamb, Green & MacRae
Document Type: Local Government
State of Origin: CA
Represented Org: City of Sunnyvale
Document Date: 09/25/97
Subject Matter Code: E-01c Executive Order 12866
References: Letter CTR-021 incorporates by reference letter CTR-035
Attachments? Y
CROSS REFERENCES J
R
S
I-01

Comment: It is with a sense of reluctance that Sunnyvale joins in CASA/Tri-TAC's adverse comments on the CTR and the EA, and Sunnyvale does so in a spirit of constructive criticism and with an expectation that the Agency will make the necessary adjustments in its approach towards the CTR before the final rule is promulgated. In addition, in the same spirit and with the same expectation, Sunnyvale would like to make the following points on its own behalf:

3. Failure to Address Important Stormwater-Related Issues. In addition to its POTW, Sunnyvale is the owner of a system of storm drains which contribute wet weather flows to the South Bay. We are concerned that the EA entirely neglects the potential impacts of the proposed CTR on the storm drains. The EA entirely omits any meaningful analysis of the costs of bringing storm drains into compliance with the proposed CTR, thereby significantly understating the overall costs of the CTR. We believe that this omission is violative of the Agency's legal obligations under the authorities cited in the preceding paragraph.

In addition, we join in the comments being filed by the various other operators of stormwater collection systems to the effect that EPA has overstated the legal requirements for storm drains to comply with numerical criteria.

Response to: CTR-021-006b

EPA did not include benefits or costs of controlling nonpoint sources or storm water dischargers in its estimates of benefits and costs of the CTR. EPA believes that the final rule will not have a direct effect on sources not permitted under the NPDES program (e.g., nonpoint sources) or NPDES sources not typically subject to numeric water quality-based effluent limits (e.g., wet weather discharges) beyond those already being implemented under current state programs. The CTR language allows (consistent with EPA's policy) the practice of applying maximum extent practicable (MEP) to MS4 permits, along with BMPs as effluent limits to meet water quality standards where infeasible or insufficient information exists to develop water quality-based effluent limits. Any potential indirect effect on nonpoint sources and wet weather discharges, such as runoff from farms, urban areas, and abandoned mines, and contaminated sediment, is unknown at this time. Many of the programs developed to control nonpoint sources and wet weather discharges are already in place in the State of California. Costs due to these programs have already been incurred or will soon be incurred owing to existing federal, State, and local environmental programs. EPA evaluated the comments and analyses submitted by commenters providing costs for controlling nonpoint sources and none of these comments provided a definitive argument that

storm water dischargers cannot achieve compliance with the proposed water quality criteria or that compliance would result in widespread economic impact or hardship.

EPA also acknowledges that nonpoint sources and wet weather discharges are technically difficult to model and evaluate costs because they are intermittent and highly variable. Nonpoint source and wet weather discharges also occur under different hydrologic or climatic conditions than continuous discharges from industrial and municipal facilities, which are evaluated under critical low flow or drought conditions. Thus, evaluating agricultural nonpoint source discharges and storm water discharges and their effects on the environment is highly site-specific and data intensive.

See also response to CTR-040-004.

Comment ID: CTR-031-006c
Comment Author: Fresno Metro. Flood Ctrl Dist.
Document Type: Flood Ctrl. District
State of Origin: CA
Represented Org:
Document Date: 09/25/97
Subject Matter Code: E-01c Executive Order 12866
References: Letter CTR-031 incorporates by reference letter CTR-027
Attachments? N
CROSS REFERENCES J
R

Comment: b. If the CTR as proposed in the current draft is applied to municipal storm water dischargers so as to require numeric effluent limitations in municipal stormwater permits, the cost to the public will be phenomenal. In the economic analysis of the CTR, EPA failed to consider these costs, and failed to consider the costs to industrial storm water dischargers as well.

The District Is urban storm water drainage system captures through retention 90% of its annual average runoff, and discharges 90% after detention (1% is directly discharged without treatment). The system cost in 1997 dollars is estimated at $500 million.

The only option available to the District to mitigate violations of the proposed criteria would be to expand system storage to capture 100% of average annual runoff. Increasing system storage by 20,000 acre feet (estimated additional storage required for average years), at the current cost of $11,000-$20,00 per acre foot of storage, would result in a capital expenditure of $220,000,000 to $400,000,000.

Even with this exorbitant investment, in approximately half of the rain seasons storage would be exceeded, and 100% of the discharges would be expected to exceed the dissolved metals criteria noted above.

Smaller cities (under 50,000) in California are currently subject to NPDES municipal storm water discharge permits, and many more will be included upon implementation of the Stormwater Phase II program. EPA's failure to assess economic impacts on small cities would appear to be contrary to the requirements of the Federal Regulatory Flexibility Act.

The District includes in its constituency industrial businesses. The District serves these businesses and

EPA's interim policy regarding application of the CTR to storm water dischargers is described in response to Comment ID CTR-001-002. The issue raised here is more one of how criteria are implemented for storm water dischargers and not the criteria themselves, which are developed to be protective of aquatic life and human health. In addition, the criteria are biologically based and, as such, if applied with the appropriate duration and frequency for storm water events, reflect a biologically-based approach.

Comment ID: CTR-031-005b
Comment Author: Fresno Metro. Flood Ctrl Dist.
Document Type: Flood Ctrl. District
State of Origin: CA
Represented Org:
Document Date: 09/25/97
Subject Matter Code: I Stormwater/Wet Weather Flows
References: Letter CTR-031 incorporates by reference letter CTR-027
Attachments? N
CROSS REFERENCES G-02

Comment: If the proposed rule is carefully and sufficiently modified to affirm a commitment by EPA to effect only its Congressional authorization as established by CWA section 402(p), then EPA's failure to assess municipal storm water dischargers" ability to attain the proposed standards and associated economic and environmental impacts may be set aside at this time. However, if EPA persists in maintaining the CTR as drafted in this regard, the ambiguities presented in the preamble demand serious consideration and analyses as follows.

a. Many of the criteria are not attainable or scientifically valid with regard to municipal stormwater dischargers, nor is the proposed approach consistent with an appropriate delegation of authority to the State.

iii. State Flexibility and Authority

The CTR states, "The criteria established in this section are subject to the State's general rules of applicability in the same way and to the same extent as are other Federally-adopted and State adopted numeric toxics criteria when applied to the same use classifications..." p. 42206

[INDENT]This language supports State Water Resources Control Board decisions and the San Francisco Basin Plan which have made it clear that municipal storm water dischargers need to address water quality standards only through the implementation, and escalation as necessary, of best management practices. As noted previously, the language of this section must be better supported in the preamble.

Notwithstanding the above statement on page 42206, the CTR actually diminishes state flexibility in implementing the rule and is inconsistent with state compliance schedules. The CTR mandates implementation limits on the state and implies a 5-year limit on compliance.

A five-year compliance schedule for municipal storm water dischargers is entirely inconsistent with the State's, EPA'S, and Phase II stakeholder's understanding of the unique challenges of storm water permitting. The draft Phase II regulation submitted to OMB includes a comprehensive reevaluation of

storm water programs after two permit terms, and recommends no added best management practices or changes in the Phase II program until such evaluation and research are completed.

Response to: CTR-031-005b

See response to CTR-040-004.

EPA believes the CTR is consistent with current State and federal regulatory approaches. Regarding the comment that the CTR is not coordinated with the State Implementation Procedures, the CTR and the State Implementation Plan have been coordinated by EPA and the State in order to be made effective in a similar timeframe. In addition, EPA will review the State Implementation Policy for consistency with the Clean Water Act.

The comment regarding NEPA and ESA review assumes that stormwater discharges subject to numeric effluent limitations will have to be treated by new end-of-pipe facilities. As explained in Comment ID CTR-001-002, EPA believes that implementation of criteria as applied to wet-weather discharges will not require the construction of end-of-pipe facilities.

Comment ID: CTR-036-008
Comment Author: County of Orange
Document Type: Local Government
State of Origin: CA
Represented Org:
Document Date: 09/25/97
Subject Matter Code: I Stormwater/Wet Weather Flows
References: Letter CTR-036 incorporates by reference letters CTR-013, CTR-018, CTR-031, CTR-034 and CTR-040
Attachments? N
CROSS REFERENCES

Comment: We are concerned that the proposed rule precedes actions to evaluate wet weather flows by EPA Headquarters and the establishment of an appropriate scientific approach for stormwater compliance.

Response to: CTR-036-008

EPA's interim policy regarding application of the CTR to storm water dischargers is described in response to Comment ID CTR-001-002. The issue raised here is more one of how criteria are implemented for storm water dischargers and not the criteria themselves, which are developed to be protective of aquatic life and human health. In addition, the criteria are biologically based and, as such, if applied with the appropriate duration and frequency for storm water events, reflect a biologically-based approach.

Comment ID: CTR-036-010b
Comment Author: County of Orange
Document Type: Local Government
State of Origin: CA

References: Letter CTR-031 incorporates by reference letter CTR-027
Attachments? N
CROSS REFERENCES R
E-01c

Comment: b. If the CTR as proposed in the current draft is applied to municipal storm water dischargers so as to require numeric effluent limitations in municipal stormwater permits, the cost to the public will be phenomenal. In the economic analysis of the CTR, EPA failed to consider these costs, and failed to consider the costs to industrial storm water dischargers as well.

The District Is urban storm water drainage system captures through retention 90% of its annual average runoff, and discharges 90% after detention (1% is directly discharged without treatment). The system cost in 1997 dollars is estimated at $500 million.

The only option available to the District to mitigate violations of the proposed criteria would be to expand system storage to capture 100% of average annual runoff. Increasing system storage by 20,000 acre feet (estimated additional storage required for average years), at the current cost of $11,000-$20,00 per acre foot of storage, would result in a capital expenditure of $220,000,000 to $400,000,000.

Even with this exorbitant investment, in approximately half of the rain seasons storage would be exceeded, and 100% of the discharges would be expected to exceed the dissolved metals criteria noted above.

Smaller cities (under 50,000) in California are currently subject to NPDES municipal storm water discharge permits, and many more will be included upon implementation of the Stormwater Phase II program. EPA's failure to assess economic impacts on small cities would appear to be contrary to the requirements of the Federal Regulatory Flexibility Act.

The District includes in its constituency industrial businesses. The District serves these businesses and assists in the oversight of their pollution prevention and storm water permit compliance efforts. Regardless of EPA' s approach to applying the CTR to municipal storm water permits, industrial storm water dischargers are directly and seriously affected by application of the CTR. EPA's failure to assess these economic impacts on our communities is short-sighted and a breach of good public policy.

Response to: CTR-031-006a

With respect to the commenter's estimate of its stormwater costs see response to CTR-040-004. With respect to EPA's compliance with the Regulatory Flexibility Act see response to CTR-013-008b.

Comment ID: CTR-034-014e
Comment Author: SCAP
Document Type: Trade Org./Assoc.
State of Origin: CA
Represented Org:
Document Date: 09/25/97
Subject Matter Code: J Storm Water Economics
References: Letter CTR-034 incorporates by reference letter CTR-035
Attachments? N

CROSS REFERENCES E-01g08
E-01b
E-01e
E-01v

Comment: * In general, we are pleased that EPA prepared an analysis of the economic impacts of the proposed CTR, and that a major portion of EPA's work focused on determining the potential impacts on POTWs. However, we believe that this analysis is based on improper assumptions and inaccurate cost estimates, resulting in unconvincing conclusions. Detailed comments can be found in Attachment 2. A few of the areas of concern are listed below:

* Small facilities appear to be under represented in EPA's sample of POTWS, especially for minor dischargers.

* The cost triggers used as regulatory relief thresholds are unrealistic, and are not consistent with EPA regulations and policies.

* The assumptions used to determine cost estimates for indirect dischargers appear to omit a large proportion of potentially affected industries.

* The Economic Analysis does not take into account projected population and industrial growth over time, which may influence effluent quality and quantity. Statewide, the population is projected to grow by nearly 50% by 2020.

* The use of average cost estimates masks economic impacts on individual dischargers, which may be particularly acute for small communities.

* The economic Analysis ignores the costs that may be incurred by stormwater dischargers and nonpoint sources to reduce loadings so that CTR criteria may be met in ambient waters.

Response to: CTR-034-014e

For analysis of the final CTR, EPA updated its Economic Analysis to reflect the most recent data and information for each sample facility and also increased the sample size for minor facilities. Based on this revised analysis, EPA estimated that minor POTWs will incur costs of approximately $5,000 per facility per year under the low cost scenario and $7,800 per facility per year under the high cost scenario.

EPA acknowledges that evaluating the impact of each individual direct discharger to inland waters, enclosed bays, and estuaries within the State of California would be the most accurate method to determine impacts of the CTR. However, the resources that would be required to perform such an analysis for each of the over 1,241 direct dischargers are beyond the resources typically available for development of environmental regulations. Therefore, in developing the methodology for estimating the compliance costs for the proposed CTR, time and budget constraints limited EPA's costing review to a subset of the regulated community. However, EPA believes that the sample selected adequately represents the various types of direct dischargers in the State.

EPA acknowledges that minor dischargers were sampled less frequently as compared to the major dischargers. However, by definition, under the NPDES permit program, facilities classified as minor would not be expected to discharge toxic pollutants in toxic amounts. Since the CTR addresses only

toxic pollutants, EPA would not expect significant, if any, impact to minor dischargers.

In analyses of the final CTR, EPA increased the sample of minors by five randomly selected facilities to bolster its analysis. EPA estimated costs of $872 per minor facility under the low scenario, and $2,682 per minor facility under the high scenario due to the CTR.

EPA also replaced Silvergate with South Bay in the sample in order to improve the estimate of the impacts of the CTR on the electric utility industry. The draft CTR cost analysis included costs for Silvergate, but the facility had closed and the data available was over five years old. The addition of South Bay, an electric utility facility with no costs, to the sample results in a more realistic, lower overall cost estimate for the electric utility industry.

As described in EA that accompanied the proposed CTR (SAIC and Jones and Stokes Associates, 1997), EPA assumed that regulatory alternatives such as phased total maximum daily loads/water quality assessments, site-specific criteria modifications, standards variances, metals translators, etc., are considered under certain circumstances. Specifically, under the low-end scenario, regulatory alternatives were assumed necessary if the cost for a sample facility exceeded $200 per toxic pounds-equivalent.

EPA assumes that a facility, when faced with the challenge of meeting water quality-based effluent limitations (WQBELs) based on CTR criteria, will select the most cost-effective controls, including regulatory alternatives. In fact, this has been the case in California, where several major POTWs have performed studies in pursuit of regulatory alternatives such as metals translators and site-specific criteria, rather than install costly controls to comply with WQBELs. EPA acknowledges that the actual cost-effectiveness value will vary by facility depending upon many factors, including the characteristics and volume of discharge, the receiving water, etc. However, EPA disagrees that the cost trigger is unrealistic, as it was reasonably based upon the highest reported cost-effectiveness values for industry categories subject to effluent limitations guidelines and standards.

Nonetheless, in the high-end estimate developed for the cost analysis accompanying the final CTR, no cost trigger was used and, thus, EPA's high-end cost estimate did not include the use of a regulatory alternative for any sample facility.

Reference: SAIC and Jones and Stokes Associates, Inc. 1997. Analysis of Potential Costs Related to the Implementation of the California Toxics Rule. Prepared for U.S. EPA, Office of Science and Technology and U.S. EPA Region IX, May 5.

EPA disagrees with the commenter's assertion that the costs for San Jose and Sunnyvale cannot be used to extrapolate costs to indirect users at other POTWs. The procedures for identifying indirect sources contributing specific pollutants to POTWs and developing and implementing a source control plan to minimize these discharges are similar for all types of pollutants. Additionally, similar to San Jose and Sunnyvale, metals were the primary pollutants of concern for POTWs evaluated in the cost analysis. Apart from these studies, EPA has no data upon which to establish facility-level compliance costs for indirect dischargers. To account for this uncertainty, EPA has revised its assumption regarding the percentages of indirect dischargers that may incur these costs. The percentage of facilities that may incur these costs was revised from the initial estimate of from 10% to 30% to a new estimate of from 30% to 70%. EPA believes that these new estimates are highly conservative (i.e. tend to overestimate costs).

Average per facility investment costs for industrial participants were estimated using the mass audit studies for copper and nickel pollution prevention projects with paybacks of less than five years. The average cost per indirect discharger was estimated to be $61,526 or $15,000 per year at an interest rate of

7 percent and over a period of five years. The total annual costs to the indirect discharger population in California then were estimated by multiplying the annualized cost ($15,000) by the total number of potentially affected indirect dischargers.

Under the MAS, the pounds removed by the pollution prevention projects with paybacks of less than five years were 560 pounds per year for copper and 148 pounds per year for nickel. Since neither San Jose nor Sunnyvale required nickel reductions, EPA did not consider pounds removed. Both San Jose and Sunnyvale did require copper reductions under the high-end cost analysis. For San Jose, required reductions equaled approximately 746 non-toxic-weighted pounds per year, however, for Sunnyvale, required reductions equaled 87 pounds per year. Since the industrial facilities to which the MAS results were applied are not as large as the San Jose facility (160 million gallons per day) whose reduction requirements exceed the MAS results, EPA estimated that load reductions from implementing the pollution prevention projects would be adequate.

EPA estimated annual (steady state) benefits and annualized costs. EPA also compared, 20- and 30-years streams of benefits and costs to account for differences in the schedule for experiencing benefits and costs (up-front capital cost and a phase-in of benefits). EPA did not forecast economic, demographic, or policy changes over these time periods. However, EPA does not expect changes in these variables to negatively impact the anticipated ratio of benefits and costs. Instead, EPA believes that increased population and economic activity in the future would likely increase the benefits of achieving standards for toxic pollutants in California waters compared to the cost of controls.

EPA selected sample facilities in order to represent different industry categories, but also various facility sizes with different flow magnitudes. For example, EPA analyzed POTW facilities which fell into three flow categories representing facilities serving very large, medium, and small communities. Costs were averaged for the sample facilities within each flow category for an industry type and then extrapolated to the universe of facilities which matched the industry type and the range in flow for that flow category. Thus, costs calculated for facilities operating in very large communities would not be applied to facilities serving very small communities.

EPA did not include benefits or costs of controlling nonpoint sources or storm water dischargers in its estimates of benefits and costs of the CTR. EPA believes that the final rule will not have a direct effect on sources not permitted under the NPDES program (e.g., nonpoint sources) or NPDES sources not typically subject to numeric water quality-based effluent limits (e.g., wet weather discharges). Any potential indirect effect on nonpoint sources and wet weather discharges, such as runoff from farms, urban areas, and abandoned mines, and contaminated sediment, is either unknown at this time or not a result of this rule. Many of the programs developed to control nonpoint sources and wet weather discharges are already in place. Costs due to these programs have already been incurred or will soon be incurred owing to existing federal, State, and local environmental programs that are distinct from the CTR.

EPA also acknowledges that nonpoint sources and wet weather discharges are technically difficult to model and evaluate costs because they are intermittent and highly variable. Nonpoint source and wet weather discharges also occur under different hydrologic or climatic conditions than continuous discharges from industrial and municipal facilities, which are evaluated under critical low flow or drought conditions. Thus, evaluating agricultural nonpoint source discharges and storm water discharges and their effects on the environment is highly site-specific and data intensive. Until this information is available, it is premature to project that the sources would incur any costs beyond those for which they are already responsible under current regulations of the Clean Water Act.

See also responses to CTR-013-003 and CTR-040-004.

Comment ID: CTR-035-044c
Comment Author: Tri-TAC/CASA
Document Type: Trade Org./Assoc.
State of Origin: CA
Represented Org:
Document Date: 09/25/97
Subject Matter Code: J Storm Water Economics
References:
Attachments? N
CROSS REFERENCES E-01c01
E-01d01

Comment: pp. 42188-42189 - Potential Costs Do Not Meet the $100 Million Threshold Under E 0. 12866 (also see discussion above) As noted on p. 42188, one component of the definition of a "significant regulatory action" is that the rule may have an annual effect on the economy of $100 million or more. EPA states on p.42189 that "the annualized potential costs that direct and indirect dischargers may incur as a result of State implementation of permit limits based on water quality standards using today's proposed criteria are estimated to be between $15 million and $87 million." We believe that this range significantly underestimates the potential costs that may be realized from the implementation of this rule. This belief is based on the numerous assumptions used by EPA that would have served to underestimate potential costs, including assumptions about regulatory flexibility that are clearly contradicted in the Preamble to the rule itself. These issues are further enumerated in Attachment 2, which contains an analysis prepared by the environmental economics firm, M. Cubed. Furthermore, we strongly believe that EPA has a duty to look at a full range of potential costs that may be incurred, and not just to look at the costs under optimistic assumptions. This duty is especially acute in light of the uncertainties of how the CTR will be implemented by the State.

We examined the potential costs for the POTW sector to determine the reasonableness of EPA's cost estimates. Our preliminary analysis indicates that for 23 major POTWs the annualized costs could reach $400 million.(*3) This estimate includes the cost to construct and operate end-of-pipe treatment processes where these would be necessary to achieve projected effluent limits. Unlike the EPA cost estimates, we have assumed that regulatory relief options may not be available, and that, based on the pollutants causing compliance problems, pollution prevention and treatment plant optimization might not be sufficient to reliably achieve compliance. Thus, we feel that this estimate reflects a more accurate depiction of the potential POTW "high-end" compliance costs that could result from the draft CTR. Based on this analysis, we believe that EPA should re-analyze the potential costs for POTWs to meet water quality-based effluent limits based on the criteria in the CTR.

As noted on p. ES-2 of the Economic Analysis (U.S. EPA, 1997a), EPA estimated only the costs to point sources, and did not estimate the potential costs for compliance for nonpoint source dischargers, despite the fact that the majority of water bodies in California are impaired due to nonpoint source discharges (SWRCB, 1996). In addition, EPA failed to estimate the costs of compliance for wet weather dischargers, such as municipal and industrial stormwater dischargers. These omissions also lead us to believe that the potential total costs of the rule are far greater than $100 million. EPA must correct these deficiencies and redo the Economic Analysis.

See also responses to CTR-013-003 and CTR-040-004.

Comment ID: CTR-035-044c
Comment Author: Tri-TAC/CASA
Document Type: Trade Org./Assoc.
State of Origin: CA
Represented Org:
Document Date: 09/25/97
Subject Matter Code: J Storm Water Economics
References:
Attachments? N
CROSS REFERENCES E-01c01
E-01d01

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(*3) Backup information for these cost estimates is available upon request.

Response to: CTR-035-044c

In response to comments received by EPA on the economic analysis that accompanied the proposed CTR, EPA collected additional data for the sample facilities. EPA also revised its estimate of potential compliance costs attributable to the CTR.

EPA's low estimate of total annualized costs of the final CTR is $33.5 million per year and its high estimate is $61.0 million per year. The low and high estimates vary based on whether effluent data or permit limits are used to assess the need for additional controls. They also vary based on whether or not alternative regulatory approaches, such as phased total maximum daily loads/water quality assessments, site-specific criteria modifications, standards variances, metals translators, etc., are considered under certain circumstances. EPA believes that its estimates of costs and benefits are sound.

EPA believes that several general observations can be made regarding studies submitted by commenters and how they differ from the EPA cost study for the final CTR. Many commenters assumed that the mere presence of a pollutant would result in costs to comply with a CTR-based WQBEL. It should be noted that the presence of a pollutant in an ambient inland water, enclosed bay, or estuary does not require permitting authorities to establish a WQBEL for that pollutant. The establishment of a permit limit is appropriate only where the permitting authority determines that a pollutant is likely to be present, and that the pollutant concentration has a "reasonable potential" to cause or contribute to an exceedance of the applicable water quality standard. Where the pollutant is not likely to be present, or is not present at levels that have reasonable potential to cause or contribute to a water quality standard exceedance, a WQBEL may not be necessary.

The majority of cost estimates provided by commenters include the costs for the addition of end-of-pipe treatment to achieve proposed CTR-based WQBELs. This was particularly the case when WQBELs were expected to be below analytical detection levels. EPA disagrees that end-of-pipe treatment is necessary to achieve CTR-based WQBELs in all cases. As discussed in SAIC (1995), there are documented cases where waste minimization or source control techniques have been used to comply with existing permit limits established below detection levels. Other examples include the Western Lake Superior Sanitary District (WLSSD), who after evaluating the costs involved to meet more stringent WQBELs for mercury with end-of-pipe treatment, concluded that pollution prevention techniques were the preferable control strategy. As a result, WLSSD published a guide designed to "assist wastewater treatment plant staff with creating and implementing their own mercury reduction projects." As a result of the efforts of WLSSD, effluent mercury levels were found to decrease from 0.58 parts per billion (ppb) to 0.015 ppb.

Although waste minimization or source controls are not always applicable, EPA assumes in its low estimate of costs that a facility would first evaluate whether process changes or modifications are feasible, prior to incurring costs for adding treatment.

In addition, many commenters assumed that compliance would be based on the WQBEL, regardless of whether it is below the analytical method detection level (MDL). This is not consistent with current practice. Instead, the State may use the "minimum level" (ML) (as defined in 40 CFR Part 136) as the required compliance point where a permit limit is established at a value below the MDL. The ML is a value at which the limited parameter can be accurately quantified, and is always greater than or equal to the MDL. To ensure that its cost estimates were conservative (i.e., erring on the side of higher costs),

EPA used the MDL as the compliance level. Although EPA used the pollutant MDL for costing purposes, the Agency acknowledges that estimating treatment costs for WQBELs below the MDL is speculative and likely unrealistic.

Finally, many of the commenters included costs related to installation of treatment for storm water discharges. As further described in the responses to CTR-021-008, CTR-013-003 and CTR-040-004, EPA believes that the final CTR will not significantly affect the current storm water program being implemented by the State, which includes the requirement to develop best management practices to control pollutants in storm water discharges. As such, EPA believes that inclusion of end-of-pipe treatment costs for storm water are inappropriate.

With respect to EPA's analysis of nonpoint source dischargers see response to CTR-034-014e.

Reference: SAIC. 1995. Assessment of Compliance Costs Resulting from Implementation of the Final Great Lakes Water Quality Guidance. Prepared for U.S. EPA, Office of Science and Technology, March 13.

Comment ID: CTR-036-002a
Comment Author: County of Orange
Document Type: Local Government
State of Origin: CA
Represented Org:
Document Date: 09/25/97
Subject Matter Code: J Storm Water Economics
References: Letter CTR-036 incorporates by reference letters CTR-013, CTR-018, CTR-031, CTR-034 and CTR-040
Attachments? N
CROSS REFERENCES E-01c

Comment: Cost to Implement the Proposed Rule

The inclusion of municipal stormwater discharges under the proposed rule renders the economic analysis invalid, noting municipal studies that show that stormwater discharges cannot comply with all of the proposed criteria with anything short of major national or regional product substitutions, or end-of-pipe treatment:

The Fresno Metropolitan Flood Control District conducted an attainability analysis on stormwater discharges from its urbanized area detention basins. The analysis showed that even with pollutant reductions in the basins, the proposed criteria would not be met.

The Sacramento Stormwater Program conducted an attainability analysis and found that even with an aggressive BMP program the urbanized area would not achieve certain of the water quality criteria, and that the cost of treatment would be on the order of $2 billion.

A preliminary attainability analysis conducted by Orange County, based on a limited dataset, indicates similar findings to Fresno and Sacramento in spite of the implementation of a significant BMP program over a multi-year period (see Attachment 2).

that larger samples of facilities from 0-10 MGD and from 10-100 MGD also would be necessary to obtain valid estimates of POTW costs. In addition, by assuming that existing facilities that contain effluent limits for toxic pollutants were representative facilities and using them as the basis for extrapolation to the universe of potentially affected facilities, EPA may have failed to include a major category of costs. By ignoring the costs of those facilities meeting their current permit limits, EPA is assuming that the facilities they are extrapolating to have similar current permit limits, which was not demonstrated to be the case. Therefore, EPA should reexamine the use of this assumption in the analysis of POTW costs.

Response to: CTR-035-046b

See responses to CTR-059-018 and CTR-040-024.

Comment ID: CTR-035-048
Comment Author: Tri-TAC/CASA
Document Type: Trade Org./Assoc.
State of Origin: CA
Represented Org:
Document Date: 09/25/97
Subject Matter Code: E-01g09 Affected Facilities
References:
Attachments? N
CROSS REFERENCES

Comment: pp. 2-36 - 2-37 (U.S. EPA, 1997b) -- Use of Average Cost Estimates for Extrapolation EPA's use of average costs to estimate individual POTW costs masks a significant range in expenditures, indicating that some communities will be much more significantly impacted than others. By using averages for extrapolation rather than the full range, total cost estimates are likely to be severely underestimated.

Response to: CTR-035-048

EPA selected sample facilities in order to represent different industry categories, but also various facility sizes with different flow magnitudes. For example, EPA analyzed POTW facilities which fell into three flow categories representing facilities serving very large, medium, and small communities. Costs were averaged for the sample facilities within each flow category for an industry type and then extrapolated to the universe of facilities which matched the industry type and the range in flow for that flow category. Thus, costs calculated for facilities operating in very large communities would not be applied to facilities serving very small communities. See also response to CTR-059-018.

This position is contrary to both the letter and the spirit of the RFA. The fact that the toxics criteria contained in the proposed rule must be translated into water quality standards and, in turn, NPDES permit effluent limitations, does not negate the fact that the burden of complying and implementing such toxics criteria ultimately will be borne by individual municipalities and business entities. As noted above, the costs to municipalities alone could run into billion of dollars placing a severe strain on their budgets and forcing them to divert funds currently allocated to other important municipal services, including public safety.

Moreover, EPA's statement that "California will have a number of discretionary choices associated with permit writing" is disingenuous and ironic in light of EPA's rationale for issuing the proposed rule. The toxics criteria will necessarily narrow the State's discretion in issuing NPDES permits and in establishing effluent limits for such permits. If EPA had meant for the State to have any serious discretion, it would not be promulgating these criteria in the first place.

Response to: CTR-036-004a

The purpose of the CTR is to fill the current gaps in water quality criteria in inland surface waters, enclosed bays, and estuaries. EPA disagrees that the State will not have substantial discretion in issuing NPDES permits under the rule. The CTR establishes pollutant levels necessary to protect designated uses. Establishing numeric criteria in the CTR does not limit the discretion of permit writers to use appropriate and flexible tools such as mixing zones or translators for dissolved metals criteria in establishing effluent limits. In addition, if a discharger believes the CTR criterion is inappropriately overprotective of the designated use, the discharger can request the State and EPA to approve a site-specific criterion or to downgrade the designated use.

Comment ID: CTR-040-004
Comment Author: County of Sacramento Water Div
Document Type: Storm Water Auth.
State of Origin: CA
Represented Org:
Document Date: 09/25/97
Subject Matter Code: J Storm Water Economics
References: Letter CTR-040 incorporates by reference letter CTR-027
Attachments? Y
CROSS REFERENCES

Comment: MAJOR CONCERNS

We do, however, have fundamental concerns with the Rule as it is presently proposed and its supporting economic analysis. We believe the Rule can be modified in a manner that will be responsive to our concerns while at the same time being consistent with applicable Federal law and regulations. Our major concerns are presented here and are followed by our recommended modifications.

1. Concern: The Rule, as presently proposed, appears to require discharges from municipal stormwater programs to meet water quality based effluent limits (WQBELs).

* The enclosed attainability analysis (See Attachment A) demonstrates that implementation of an

aggressive BMP-based program will cost on the order of $20 million per year. And, despite the implementation of ever escalating BMPs, the Sacramento Stormwater Management Program will not achieve several of the proposed aquatic life criteria (for copper, lead, and zinc) and human health criteria (for PAHs).

Response to: CTR-040-004

EPA disagrees with the commenter's interpretation of the language regarding wet weather discharges in the proposed CTR, and has clarified the language in the section of the CTR that discusses the applicability of the rule to wet weather discharges. EPA believes that the CTR language allows the practice of applying maximum extent practicable (MEP) to MS4 permits, along with best management practices (BMPs) as effluent limits to meet water quality standards where infeasible or insufficient information exists to develop WQBELs.

Section 402(p)(3)(B) requires municipal separate storm water systems to 1) prohibit non-storm water discharges, and 2) reduce the discharge of pollutants in storm water to MEP. The Agency has purposely not defined MEP to allow municipalities flexibility in designing pollution control measures. MEP is a dynamic performance standard which requires the municipality to demonstrate permit compliance in many ways including the use of BMPs, proper maintenance of their BMPs, and ongoing assessment of BMP performance in reducing pollutant discharges. EPA has determined that, where sufficient information does not exist on which to base WQBELs, or where infeasible, the use of BMPs is consistent with the requirement that municipal storm water programs require controls to reduce the discharge of pollutants to MEP in order to attain and maintain water quality standards.

EPA articulated its position on the use of BMPs in storm water permits in the Interim Permitting Approach For Water Quality-Based Effluent Limitations In Storm Water Permits signed by the Assistant Administrator for Water, Robert Perciasepe on August 1, 1996 (61 FR 43761, August 19, 1996). The policy focuses on the question of the applicability of WQBELs to MS4 permits, and whether or not numeric effluent limitations are required, or could be represented by other control mechanisms such as BMPs. The policy affirms the use of best management practices as a means to attain water quality standards in storm water permits. The policy reads as follows:

In response to recent questions regarding the type of water quality-based effluent limitations that are most appropriate for National Pollutant Discharge Elimination System (NPDES) storm water permits, the Environmental Protection Agency (EPA) is adopting an interim permitting approach for regulating wet weather storm water discharges. Due to the nature of storm water discharges, and the typical lack of information on which to base numeric water quality-based effluent limitations (expressed as concentration and mass), EPA will use an interim permitting approach for NPDES storm water permits.

The interim permitting approach uses best management practices (BMPs) in first-round storm water permits, and expanded or better-tailored BMPs in subsequent permits, where necessary, to provide for the attainment of water quality standards. In cases where adequate information exists to develop more specific conditions or limitations to meet water quality standards, these conditions or limitations are to be incorporated into storm water permits, as necessary and appropriate.

This interim permitting approach is not intended to affect those storm water permits that already include appropriately derived numeric water quality-based effluent limitations. Since the policy only applies to water quality-based effluent limitations, it is not intended to affect technology-based limitations, such as those based on effluent guidelines or the permit writer's best professional judgement, that are incorporated into storm water permits.

Each storm water permit should include a coordinated and cost-effective monitoring program to gather necessary information to determine the extent to which the permit provides for attainment of applicable water quality standards and to determine the appropriate conditions or limitations for subsequent permits. Such a monitoring program may include ambient monitoring, receiving water assessment, discharge monitoring (as needed), or a combination of monitoring procedures designed to gather necessary information.

This interim permitting approach applies only to EPA; however, EPA also encourages authorized States and Tribes to adopt similar policies for storm water permits. This interim permitting approach provides time, where necessary, to more fully assess the range of issues and possible options for the control of storm water discharges for the protection of water quality. This interim permitting approach may be modified as a result of the ongoing Urban Wet Weather Flows Federal Advisory Committee policy dialogue on this subject.

EPA also reviewed the attached report entitled "Technical Report Assessing the Attainability of Water Quality Criteria Proposed in the California Toxics Rule," a report prepared for Sacramento County Stormwater Management Program by Larry Walker Associates (LWA). In response, EPA has the following concerns and comments regarding various aspects of the report and its conclusions.

General Limitations of the Analysis

* LWA do not provide the raw data upon which they base their conclusions regarding potential compliance problems with the proposed CTR water quality criteria. Without the raw data, EPA could not fully assess the validity of the analysis.

* The data may not be representative of the storm water discharges to the American and Sacramento Rivers. Most samples were collected for first-flush events, usually one hour or less in duration. As a result, the in stream exposure period is probably one hour at most, which corresponds to the exposure period for acute criteria, not chronic criteria as used in the LWA analysis.

* LWA report that applying BMPs to storm water would not result in attainment of criteria as proposed in the CTR. However, LWA focus on the most stringent (and unlikely) scenario for attainability of criteria (i.e., applying chronic criteria with no allowance for dilution). According to LWA's own analysis, BMPs would nearly achieve compliance under the scenario of applying acute criteria and dilution factors to storm water flows. If mathematical errors in LWA's Table's 11 and 12 are corrected, the analysis demonstrates compliance with acute criteria for even the 99.91 percentile values of copper, lead, and zinc in the Sacramento River, and for lead in the American River, with no additional treatment.

* The analysis also may not be reflective of the compliance scenario for other California waters. The metals criteria are based on a low hardness value for the American River (25 mg/l as CaCO3). This hardness value is lower than any of the hardness values observed for the economic analysis of sample facilities throughout California. As a result, the criteria for the American River are very stringent (i.e., criteria become more stringent with lower hardness) compared to criteria for California waters in general.

* LWA compare the concentration of the dissolved fraction of metals in the discharge to the instream criterion values expressed as dissolved metals to assess compliance. This approach may be overly stringent because it does not account for the partitioning of dissolved metals present in the discharge to suspended solids present in receiving waters (particularly during a storm event when suspended solids are elevated). Thus, less dissolved metals may be available in the water column than LWA's analysis

would estimate. In addition, this is not the approach that is used to determine compliance under the NPDES program. The NPDES regulations require all permit limits for metals to be expressed in terms of "total recoverable metals" [40 CFR 122.45]. In order to determine whether a discharge would meet NPDES permit limits developed to protect water quality, the instream criteria should not be used directly, but should be converted to a water quality-based effluent limit (WQBEL) using the EPA standards-to-permits procedures. The development of WQBELs expressed as total recoverable metals accounts for the partitioning of dissolved metals (present in the discharge) to suspended solids that are present in the receiving water. EPA used this approach in its cost evaluations.

* Cost estimates provided in the LWA analysis for complying with the CTR appear to mix BMP implementation costs to comply with Sacramento's storm water permit with new compliance costs resulting from the CTR. EPA's economic analysis only evaluates the incremental impact of the water quality standards for toxics compared to the baseline program to avoid a double counting of costs (and benefits).

Specific Data and Sampling Issues

* LWA calculated average event mean concentrations (AEMC) to represent the entire urbanized drainage area of Sacramento County. Samples were combined to calculate AEMCs (based on contributions of 95% commercial/residential and 5% industrial) utilizing three sampling locations. Although LWA indicate that both grab and composite samples were collected to estimate the AEMCs, as well as annual loadings, it is unclear how the different sample types were used. According to the EPA's Guidance Manual For The Preparation of Part 2 of the NPDES Permit Applications for Discharges From Municipal Separate Storm Sewer Systems (EPA 833-B-92-002), an event mean concentration (EMC) is determined from analyses of flow-weighted composite samples. In order to qualify as a valid sample, the storm event must be sampled for at least three hours, or for the entire storm if the event lasts less than three hours. Of great importance in such derivations is consistency in methodology, i.e., the first method employed must always be employed to ensure that results can be compared. LWA do not provide any information to confirm the consistency of sampling procedures.

* LWA completed a discharge characterization project (DCP) for storm water discharges in 1996 (not included as part of commenter's submission). LWA state that the DCP evaluated all urban runoff monitoring data available. However, it is not clear whether the data set used for the DCP was the same as that analyzed for the current report, or whether it was more extensive. LWA state that the DCP used "statistical modeling" (unnamed methodology) to "characterize and estimate" mass loadings. They also state that data on heavy metals, conventional and non-conventional pollutants were "updated for 1996/1997 data. However, they do not report which procedures governed the "update," whether the data sets were consistent, or under what circumstances they were sampled and analyzed. EPA believes that this lack of information makes it impossible to evaluate the methodologies used to extrapolate the data set and draw conclusions as to its appropriateness in demonstrating nonattainability of toxic criteria. In addition, LWA cite a "robust statistical method" for deciding whether to use detection limit values for nondetect data. This method is not described.

* It appears from Charts 1 through 5 presented in the report, that LWA use a limited data set (not included as part of commenter's submission) for each of the pollutants of concern, and use statistical projections to predict "worst case" (i.e., 95th, 99th, and 99.91th percentiles) discharge values. These predicted discharge concentrations are then used to assess whether instream criteria would be met. This is an extremely conservative approach that would not be used by EPA to establish compliance with water quality-based effluent limits or water quality criteria. To assess the potential for metals and organics to exceed aquatic life and human health criteria during intermittent, high flow, storm water episodes, a

complex dynamic modeling effort would be required. This procedure is highly data intensive, and is beyond the scope of this costing analysis; nevertheless, it should have been employed in the LWA analysis to accurately determine the potential for exceedances of criteria. The generalized technical approach for assessing compliance with the applicable criteria is described in EPA's Technical Support Document for Water Quality-Based Toxics Control (March 1991). For typical point sources, this is performed by developing wasteload allocations (using steady-state models, under low flow conditions) and developing WQBELs based on these wasteload allocations. The process of developing wasteload allocations and WQBELs that would be protective of applicable criteria during storm events is significantly more difficult, and is not described in current EPA guidance. The EPA Center for Exposure Assessment Modeling (CEAM), located at the National Exposure Research Laboratory in Athens, Georgia, maintains and distributes environmental simulation models and databases for urban and rural nonpoint sources. Information on dynamic models and their use for storm water modeling can be obtained through CEAM.

Cost Methodology Issues

* It is unclear why Tables 7 and 7a were included in the analysis. These tables appear to present costs associated with the implementation of the BMPs required by the current Sacramento MS4 permit. They are, therefore, distinct from any incremental attainment costs associated with treatment of storm water due to water quality criteria. The potential costs resulting from the alternative of collecting and treating all storm water prior to discharge are summarized in Figure C, however, no details, explanatory notes, or assumptions are presented in support of this estimate.

* Figure B states that capital costs range from $160 to $187 million. However, EPA notes that only the higher value is presented in the summary. The choice to use only the higher value is not explained. It appears that the difference in the values results from the assumed level of engineering and other costs (50% of capital costs, as opposed to 30%, see Table 7). Other published sources have traditionally used a percentage more consistent with the lower of the two values referenced in Table 7 (see, for example, Estimating Costs for the Economic Benefits of RCRA Noncompliance, U.S. EPA, March 1997, page 1-4, where the percentage increase due to engineering and inspection, contractor's overhead and profit, and contingency is 35%).

Other Methodological Issues

* LWA do not clearly state what proportion of the County's runoff enters the American River versus the Sacramento River. LWA base their presentation largely on discharges to the American River which has a two-fold lower hardness concentration, resulting in the most stringent metals criteria. As noted above, a hardness value of 25 mg/l (as CaCO3) is on the very low end of the range for receiving waters considered in the CTR analysis.

* LWA focus their presentation on the "no dilution" scenario. However, both the American and Sacramento Rivers provide substantial dilution (reducing runoff concentrations by 51% and 86%, respectively). The analysis developed in the LWA report summarizes the results of this evaluation in Tables 11 and 12. In presenting the data, the LWA evaluation incorrectly calculates the dilution provided by the Sacramento River. When correctly calculated, the analysis indicates that the acute criteria for all of the metals would be met at the 99.91 percentile value in the Sacramento River. In addition the acute criterion for lead would be met for the American Rivers. Furthermore, compliance with copper and zinc criteria would practically be achieved assuming dilution and implementation of BMPs (i.e., 70% reduction of copper and zinc by BMPs). In their assessment of instream mixing, the LWA analysis used ambient background pollutant concentrations presented in Tables 11 and 12. While

all other values are indicated as "dissolved" concentrations, no such note is provided for the background data. If these values are expressed as total metals it would overestimate the background load and thus underestimate the available assimilative capacity of the stream.

* Similarly, the LWA does not account for in-stream dilution in its evaluation of the potential for PAH compounds and pentachlorophenol to exceed human health criteria. In its evaluation, LWA again projects worst case (i.e., 95th, 99th, and 99.91th percentile) storm water concentration values and compares these values directly to ambient human health criteria. This approach significantly overestimates the potential for exceeding these criteria. Human health criteria are developed assuming a lifetime exposure to the pollutant at a daily ingestion rate of 2 liters of drinking water and ingestion of an assumed mass of aquatic organisms. To account for such long term exposures, EPA permitting procedures recommend using typical stream flows (e.g., harmonic mean) in developing wasteload allocations. The calculated wasteload allocations are also assumed to represent long-term averages (i.e., average monthly permit limits) rather than maximum daily values. Depending on the available dilution, this approach generally results in WQBELs much higher (i.e., less stringent) than the actual criterion values. Based on LWA projections, it appears that even a small allowance for dilution would resolve the compliance concerns or pentachlorophenol. The potential for compliance concerns identified by LWA for PAH compounds could only be accurately determined based on the results of the dynamic modeling assessment previously discussed.

* In calculating the allowable discharge concentration (Ce) for lead and zinc, LWA used detection level values for ambient background concentrations even though no lead or zinc were measured. Since background concentrations may actually be significantly lower than the detection level, this may result in an overly stringent Ce (and thus more costly to achieve).

Comments from the Fresno Metropolitan Flood Control District (Fresno) and the California Department of Transportation (Caltrans)

EPA also reviewed comments submitted by the Fresno Metropolitan Flood Control District (Fresno) and the California Department of Transportation (Caltrans) on the CTR provisions relating to storm water. In response, EPA has the following concerns and comments regarding various aspects of the submissions and their conclusions. Some of these issues are addressed in the above review of LWA's submission and are so referenced.

General Limitations of the Analysis

* Neither Fresno nor Caltrans provide the raw data upon which they base their conclusions regarding potential compliance problems with the proposed CTR water quality criteria. Without the raw data, EPA could not fully assess the validity of the analysis.

* Caltrans' data came from eight storm events at three urban freeway sites in the Los Angeles area, but the sampling methodology is not specified (i.e., first flush, peak, outfall, street, etc.). The data may not be representative of the storm water discharges for all Caltrans facilities. Fresno does not specify the sampling methodology nor the number of sites or storm events sampled.

* Fresno reports that applying BMPs (including end-of-pipe) to storm water would not result in attainment of criteria as proposed in the CTR. However, Fresno presents a stringent (and unlikely) scenario for attainability of criteria (i.e., applying chronic criteria).

* Caltrans reports that applying source reduction and nonstructural BMPs will not provide the reduction

necessary to meet the criteria. End-of-pipe treatment would be required. Although acute criteria are used in this analysis, no data or estimates are provided to demonstrate that BMPs would not result in reductions needed to comply with properly developed WQBELs.

* The analysis also may not be reflective of the compliance scenario for other California waters.

* Fresno and Caltrans compare the concentration of the dissolved fraction of metals in the discharge to the instream criterion values expressed as dissolved metals to assess compliance. See the response to LWA for EPA's discussion of the problems with this approach.

* Cost estimates provided in the Fresno and Caltrans analysis for complying with the CTR may mix BMP implementation costs to comply with local storm water permits with new compliance costs resulting from the CTR. EPA's economic analysis only evaluates the incremental impact of the water quality standards for toxics compared to the baseline program to avoid a double counting of costs (and benefits).

Specific Data and Sampling Issues

* Caltrans specifies that consistent procedures were used at all three sampling sites, but it does not specify the exact methodology (i.e., sampling duration, first flush, etc.). Of great importance in data analysis is consistency in methodology, i.e., the first method employed must always be employed to ensure that results can be compared.

Fresno does not describe its sampling procedures or methodology.

* Caltrans uses a limited data set (not included as part of commenter's submission) for each of the pollutants of concern, and uses statistical projections to predict "worst case" (i.e., 99.91th percentile) discharge values. These predicted discharge concentrations are then used to assess whether in stream criteria would be met. This is an extremely conservative approach that would not be used to establish compliance with water quality-based effluent limits or water quality criteria because compliance is based on measured values and not on statistically derived worst case values.

Summary and Recommendations

The LWA report was based on storm water data collected at outfalls discharging to the American and Sacramento Rivers. The report did not provide the raw data, nor did it provide detailed information on how these data were collected. The primary scenario described in the report (i.e., comparing projected worse case discharge concentrations directly to chronic aquatic life and human health criteria with no allowance for dilution) is highly conservative in comparison with the water quality-based permitting and compliance procedures that would be implemented by EPA. The LWA analysis also did not consider the equilibrium partitioning of dissolved and total metals that may occur instream during a storm event. An ancillary analysis summarized in the LWA report compared the maximum projected discharge concentrations (99.91 percentile values) of copper, lead, and zinc to the acute aquatic life criteria accounting for dilution. If errors are corrected in the LWA spreadsheet, the LWA data indicate that there would be no compliance problems for these parameters in the Sacramento River, and that BMPs would likely result in compliance in the American River. While the LWA analysis provides information that could be useful in determining "reasonable potential" for possible WQBEL development, the approach is not consistent with water quality-based permitting procedures or EPA's approach to compliance assessment.

To accurately determine whether additional treatment would be necessary to control storm water discharges to the American and Sacramento Rivers, EPA would conduct a comprehensive modeling effort to develop appropriate WQBELs. The WQBELs (for organics and total metals), would be developed using dynamic models to account for the intermittent loadings and exposures from the storm water discharges. EPA recognizes that the determination of appropriate WQBELs for storm water outfalls is a difficult modeling effort that requires intensive data collection and verification. The LWA report has not utilized this approach, and the necessary level of effort is not within the scope of the agency's CTR analysis.

In summary, the CTR language allows (consistent with EPA's policy) the practice of applying MEP to MS4 permits, along with BMPs as effluent limits to meet water quality standards where infeasible or insufficient information exists to develop WQBELs. Neither the LWA report, nor the Fresno and Caltrans comments, provide a definitive argument that storm water dischargers cannot achieve compliance with the proposed water quality criteria or that compliance would result in widespread economic impact or hardship. Although none of the three comment submissions discussed above provide the raw data used for their analyses for EPA to fully assess the validity of the analyses, their methodology does not assess compliance with WQBELs as would be developed by EPA. In particular, the assessments do not account for dilution or the partitioning of dissolved metals to suspended solids present in the receiving waters. LWA and Caltrans also do not apply the appropriate criteria in assessing compliance and use statistical projections to predict "worst case" discharge concentrations, an approach that would not be used to establish compliance with WQBELs or water quality criteria. In addition, LWA's estimated costs do not accurately portray the incremental expense to Sacramento County resulting from implementation of the CTR, that is, the costs attributable to the CTR criteria that are over and above the cost of implementing the current storm water program.

Comment ID: CTR-040-006
Comment Author: County of Sacramento Water Div
Document Type: Storm Water Auth.
State of Origin: CA
Represented Org:
Document Date: 09/25/97
Subject Matter Code: J Storm Water Economics
References: Letter CTR-040 incorporates by reference letter CTR-027
Attachments? Y
CROSS REFERENCES

Comment: MAJOR CONCERNS

We do, however, have fundamental concerns with the Rule as it is presently proposed and its supporting economic analysis. We believe the Rule can be modified in a manner that will be responsive to our concerns while at the same time being consistent with applicable Federal law and regulations. Our major concerns are presented here and are followed by our recommended modifications.

1. Concern: The Rule, as presently proposed, appears to require discharges from municipal stormwater programs to meet water quality based effluent limits (WQBELs).

* In order to achieve WQBELS, it will be necessary to intercept all of the urban runoff from the Sacramento metropolitan area (including that discharged to urban streams and the American River),

due to these programs have already been incurred or will soon be incurred owing to existing federal, State, and local environmental programs.

EPA also acknowledges that nonpoint sources and wet weather discharges are technically difficult to model and evaluate costs because they are intermittent and highly variable. Nonpoint source and wet weather discharges also occur under different hydrologic or climatic conditions than continuous discharges from industrial and municipal facilities, which are evaluated under critical low flow or drought conditions. Thus, evaluating agricultural nonpoint source discharges and storm water discharges and their effects on the environment is highly site-specific and data intensive.

See also response to CTR-040-004.

Comment ID: CTRH-001-001b
Comment Author: Robert Hale
Document Type: Public Hearing
State of Origin: CA
Represented Org: CA Stormwater Task Force
Document Date: 09/17/97
Subject Matter Code: J Storm Water Economics
References:
Attachments? N
CROSS REFERENCES I-1

Comment: MR. HALE: Good afternoon. My name is Robert Hale and I'm the chairman of the California Stormwater Quality Task Force which is located at 951 Turner Court, Suite 300, in Hayward.

This task force is a statewide organization representing municipal separate storm sewer systems that hold National Pollutant Discharge Elimination System, NPDES, permits to discharge stormwater.

My comments today are on behalf of the -- principally on behalf of that task force. I also am chairman of the management committee of the Alameda Countywide Clean Water Program. I will make some comments with respect to Alameda County.

As proposed by EPA, the preamble language, which is the principal point here in referring to numeric effluent limitations and water quality based effluent limitations, is clearly inconsistent with the plain language used by Congress in incorporating the maximum extent practicable standard into Section 402(p)(3)(B) of the Clean Water Act.

You may argue that this reference is only in the preamble and not in the main text of the rule; but it's my understanding, however, that the preamble itself is supposed to explain and clarify the meaning of the rule and the Clean Water Act. This proposed language would instead appear to be trying to change one of the fundamental points of the Clean Water Act.

The reason I think this point is fundamental is that the cost to society, and to our county in this case and to the states, is an important consideration. Congress considers the entirety of the tasks that the country has to do, rather than going for broke on one issue such as stormwater quality.

In short, the Congress balances the larger picture, and the language in Section 402(p)(3)(B) actually

reflects that balance. I believe that Section 402(p) says what it says for a good reason. The only economically feasible means of achieving water quality standards is through best management practices.

To illustrate this point, I work in Alameda County as chairman of the Clean Water Program there, and I did some rough calculations here. We often get storms as much as 2 inches in a 24-hour period. That's several times a winter. If you had a one-day storm, as I figure it, that will work out to 5 billion gallons of runoff water.

To treat this much water, if we were driven to this sort of the extreme case by the language in the preamble -- and I'm not talking about the text of the rule so much as the language in that preamble -- if it were to drive us in this extreme case to have -- to do end-of-pipe treatment for our discharges in order to meet the standards that are there, and to keep up -- basically keep up with the storms, which often come one behind the other within a couple days, it would necessitate building dozens, perhaps more, treatment plants of substantial size and would necessitate the use or acquisition of valuable industrial properties on the margins of the bay. Which I just did a little separate figuring here; I'm figuring it costs about $3 a gallon to treat -- to secondarily treat sanitary sewage and about $4 a gallon to store it.

I estimate that a storm of this size -- to be able to handle a storm of this size would cost between 35 and $50 billion for Alameda County alone. This is for a population of 1.35 million residents.

And this does not account for the acquisition of property needed to do this, assuming we could store it in facilities or properties we already own. And it also does not account for the secondary treatment. In fact, we might have some difficulty achieving the standards that are in the rule.

And there's a way you can express this getting down to the nuts and bolts of it, which I like to do. I did some rough estimates of the size of the Oakland Coliseum, and if you were to use structures the size of the Oakland Coliseum for storing this water from one of these storms, I figured it would come out to -- you'd need 50 of them to store the runoff from this one storm that I've got here.

And I know some of you might be thinking about how the A's are doing right now and this might not be a bad idea. We can, say, think about leaving an extra one there for the A's and Raiders and build 50 more of them.

But the point is, we're talking about a tremendous investment in the infrastructure here, and it's very difficult for us to keep up with.

So let's see. Just a few more points here.

So we're not really talking about upgrades to existing delivery and treatment systems. We would have to start from scratch and build pumping systems, conveyance systems, to build an entire infrastructure. The cost would be prohibitive for us in Alameda County. This is a -- sort of one of the worst-case scenarios. And I think that the economic rule -- or the economic analysis in the rule doesn't do this justice.

So --

MR. MORRIS: Have you done any modelling?

MR. HALE: This is strictly back-of-the-envelope type calculations at this point. I don't know whether or not -- what discharges the storm concentrations would result in.

The first question I have on modeling is to see what these discharges of stormwater with these effluent concentrations -- under the storm conditions if we would be -- would have a higher flow than the drought flow condition which was modeled.

When you have a storm event, the stream conditions are different, the hydrology is different, the modeling characteristics. We could work out the scenario. And it's true that when you've got a huge storm, water fires right out the bay and out the Golden Gate. We might even probably need to talk about that and work on that.

Response to: CTRH-001-001b

EPA disagrees with the comments. See response to CTR-001-003. For a discussion of EPA's evaluation of studies concerning costs associated with achieving water quality criteria for storm water discharges, see responses to Comments CTR-013-003 and CTR-040-004. For a discussion of the scientific validity of CTR criteria, See response to CTR-031-004c.

EPA disagrees with the cost estimates provided by the commenter as EPA does not believe that storage and treatment of stormwater would be required to ensure compliance with the CTR. See response to CTR-021-006b.

Comment ID: CTRH-001-029
Comment Author: Michelle Pla
Document Type: Public Hearing
State of Origin: CA
Represented Org: S.F. Public Utilities Com
Document Date: 09/17/97
Subject Matter Code: J Storm Water Economics
References:
Attachments? N
CROSS REFERENCES

Comment: We're going to submit more responses in written comments having to do with other issues such as wet weather. I would really encourage you to listen carefully to those who have experience in building wet weather facilities.

We know it costs $4 a gallon for storage. We know the latest cost of building treatment facilities is about $3 a gallon, so those are real numbers. And so I think you do need to pay attention to the wet weather issue as well.

Response to: CTRH-001-029

See response to CTR-021-006b and CTR-001-007.

Comment ID: CTRH-001-033
Comment Author: Dave Brent
Document Type: Public Hearing
State of Origin: CA

program to protect the environment.

Response to: CTRH-002-009

See responses to CTR-021-006b and CTR-034-016.

Comment ID: CTRH-002-017
Comment Author: Alex Sheydayi
Document Type: Public Hearing
State of Origin: CA
Represented Org: Ventura Co. Flood Control
Document Date: 09/18/97
Subject Matter Code: J Storm Water Economics
References:
Attachments? N
CROSS REFERENCES

Comment: MR. SHEYDAYI: Good afternoon. I'm Alex Sheydayi of the Ventura County Flood Control District, and I'm here to speak on behalf of the Ventura County Management Program.

Before I make my comments, I would also like to express my -- our program's support for the comments that were made by Mr. Crompton earlier and also by our speakers in San Francisco that spoke on behalf of the Municipal Water Quality Management Programs statewide.

Our program -- The permit for our program was issued in August of '94. And our program basically consists of 12 permittees in the flood control district which is the municipality and the municipal permittee which is the County of Ventura and ten cities in the county.

At the time that we applied for the stormwater permit, only three municipalities in the county were required to do so. The others entered the program voluntarily in order to maintain a uniform program countywide. Currently, of the 12 corporate permittees, five corporate permittees would not even be required to have permits under Phase 20 because they have populations far west than that required for Phase 20. So you can see we have very small communities that are participating in the program voluntarily.

The commission earlier stated that one of the reasons many of the corporate permittees entered the program voluntarily is to maintain a uniform program countywide. And one of the incentives for doing that was the fact that the program was a BMP-driven program to comply with the requirements of a permit to the maximum extent practicable under the Clean Water Act.

We have also recently completed a four-year monitoring program and, using the information from the monitoring program, we have attainability of the data that we have collected for our program. This attainability data indicates that even if we comply -- apply the BMP program to the maximum extent possible, the expenditure of radial funds, we would still not be able to meet the requirements of the proposed criteria for several of the metals and other constituents, which would then -- of course, our program would go into a treatment mode for stormwater discharges. We believe that this was going to be very costly for us, particularly very costly for smaller communities who don't have the base to spread the cost of such an expense over their population.

Our programs, like so many other municipal programs in California, were based on implementation of programs to address source of weakness, not to provide the treatment. Just to give you an idea of why we concur with the other speakers concerning the economic analysis and the fallacy of the economic analysis, let me just give you a very quick example of the cost that we are currently incurring. We are currently spending $5 per -- for every man, woman, and child in Ventura County to implement a BMP-based program. And yet if you'll look at the pages that were presented in the CTR of the maximum $87 million statewide, the number will be approximately two and a half to three dollars for every person in California to implement the CTR — not just the stormwater dischargers, but for all dischargers statewide. So we think that there is something wrong with this whole analysis if we are currently exceeding the cost of the assumptions made in the analysis for compliance with CTR.

We also, as I said earlier, believe that the analysis should take into consideration the size of the communities, and as Mr. Crompton mentioned earlier, most of the municipal programs in California are very small communities and the cost of applying the treatment would be very, very difficult for them to comply with.

That's the end of my comment. I thank you for the opportunity to speak.

MR. MORRIS: Are you going to submit the data and the analyses that you did that show why -- You said you have a lot of data. Are they going to --

MR. SHEYDAYI: We are not going to submit them on the comments. We are going to be submitting that data -- It's still relatively in raw form, but we will be submitting that data to the regional board with our annual report in November.

MR. MORRIS: If you could get me or send me a copy or Diane a copy of the data and how you calculated your WQBEL, your permit limit based on the new criteria, that would be useful. I'd like to see how you did that.

MR. SHEYDAYI: Okay. We'll send you whatever we can put together.

MR. MORRIS: I think there is a misconception that people have to implement the criteria for stormwater dischargers at the drought low condition and the 7Q10 condition. That's not the case. When we issue a permit, you keep that limit for a stormwater discharge, you usually model the condition that occurs in. If you do it right, that gives you a model that gives you concentration in the receiving water and the duration of the exposure of that concentration, and then you'll compare that to the criterion and flood flow or rain flow or storm flow. Right? Usually you have enough to keep your WQBEL below the criteria and you don't see the effects. If you do a good model, you shouldn't have any impact.

If you look across the country, across the U.S., there are many, many states that have standards on the books, water quality standards that are far more stringent than the numbers we're promulgating or proposing to promulgate in Southern California. If you look at their standards, you won't see any black boxes on the end of those stormwater discharges. Nobody builds treatment for stormwater treatment in this country. They've been implementing standards for 15 years. California is no different.

Response to: CTRH-002-017

The costs attributable to the CTR are only those incremental costs which will be incurred to go from compliance with existing permits to compliance with more stringent CTR-based limits. EPA's revised

cost estimates from the Economic Analysis range from $33.5 million to $61.0 million annually. The commenter compares BMP costs of $5 per person to potential CTR compliance costs, however, this is not relevant because CTR costs are incremental costs and are not based on the costs of existing programs. See also responses to CTR-021-006b and CTR-035-048.

EXHIBIT "15"

ECONOMIC ANALYSIS OF THE CALIFORNIA TOXICS RULE

October 1999

Prepared for:

U.S. Environmental Protection Agency
Office of Science and Technology
401 M Street, S.W.
Washington, D.C. 20460

and

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LIST OF EXHIBITS

EXECUTIVE SUMMARY

This document presents the U.S. Environmental Protection Agency's (EPA or the Agency) economic analysis of the California Toxics Rule (CTR), a regulatory action that establishes numeric water quality criteria for priority toxic pollutants necessary for the State of California to meet the requirements of the Clean Water Act (CWA).

BACKGROUND

Under the CWA, states have primary authority for establishing designated uses for water bodies and for developing water quality criteria to protect those designated uses. Under Section 303(c)(2)(B) of the CWA, whenever a state adopts new water quality standards, or reviews or revises existing water quality standards, it must adopt numeric water quality criteria for priority toxic pollutants (as defined by Section 307(a) of the CWA and for which the Agency has issued a criteria guidance document per Section 304(a) of the CWA) if the absence of such criteria could reasonably be expected to interfere with a designated use of a water body.

In April 1991, California adopted two statewide water quality control plans -- the Inland Surface Waters Plan (ISWP) and the Enclosed Bays and Estuaries Plan (EBEP) -- establishing water quality criteria for the state, in part, to comply with Section 303(c)(2)(B). In November 1991, EPA disapproved some portions of each plan. In December 1992, EPA promulgated the National Toxics Rule (NTR) (57 FR 60848, December 22, 1992) for several states that had not yet met the requirements of the CWA, including the State of California for those portions of the statewide plans that it had disapproved.

Shortly after the ISWP and EBEP were adopted, several parties filed lawsuits in State Court against the California State Water Resources Control Board (SWRCB) for not complying with state law when the two statewide water quality plans were adopted. In March of 1994, the State Court issued a final decision in a consolidated case requiring the SWRCB to rescind the two plans. The SWRCB took formal action to rescind the plans in September of 1994. Since then, the State of California has been without a complete set of water quality criteria for priority toxic pollutants because only the criteria promulgated by EPA in the 1992 NTR and criteria in existing Regional Basin Plans (issued by Regional Water Quality Control Boards) remain in effect. The CTR establishes the remaining criteria that will satisfy Section 303(c)(2)(B).

In California, the State is the National Pollutant Discharge Elimination System (NPDES) permit issuing authority. There are presently 184 major point sources of which 128 are publicly owned treatment works (POTWs) and 56 are industries that directly discharge to California's inland waters, enclosed bays, and estuaries. These major point sources may be impacted when the State implements water quality standards based on criteria in the final CTR. In addition there are 1,057 minor point source dischargers. These minor dischargers are not expected to incur significant impacts as a result of State implementation of CTR water quality criteria.

PURPOSE OF THE ANALYSIS

Under Executive Order (EO) 12866 (58 FR 51735, October 4, 1993), the Agency must determine whether a regulatory action is "significant" and therefore subject to the requirements of the EO [i.e., drafting an Economic Analysis (EA) and review by the Office of Management and Budget (OMB)]. EO 12866 defines "significant" as those actions likely to lead to a rule having an annual effect on the economy of $100 million or more, or adversely and materially affecting a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or state, local, or tribal governments or communities (also known as "economically significant").

Pursuant to the terms of the order, EPA has determined that this final rule is not "significant." The CTR establishes ambient water quality criteria which, by themselves, have no impact or effect. In addition, the costs and benefits of the CTR could be negligible since implementation of permits under the CTR may not differ significantly from how the state may implement permits under current law.[1] However, EPA also acknowledges that, in the absence of the rule, current permit requirements and current effluent concentrations may continue in the future. In this case there may be a cost to some dischargers for complying with new water quality standards after those standards are translated into permit limits. Therefore, consistent with the intent of EO 12866, EPA developed this EA. EPA intends for the EA to inform the public about how entities might be affected by implementation of CTR-based water quality standards in the NPDES permit program.

The State of California has significant flexibility and discretion as to how it chooses to implement the CTR within the NPDES permit program. EPA's analysis assumes implementation procedures based on a combination of EPA guidance and current permit conditions for the facilities examined. This is appropriate because if the state does not adopt statewide implementation provisions, the CTR-based water quality standards would be implemented using existing state basin plan provisions and EPA regulations and guidance. However, a more precise measure of costs and benefits may not be known until the state adopts its implementation provisions.

This economic analysis develops revised estimates of the potential benefits and costs associated with implementing the CTR (EPA is promulgating the rule as final). EPA revised its analysis in response to comments on the EA that accompanied the proposed rule and to reflect more recent data and information to refine the analysis of benefits and costs. Wherever possible, the costs and benefits are expressed in monetary terms.

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[1] That is, the state could rely on its narrative toxicity standard and implementation of the standard using best professional judgment to set numeric water quality-based effluent limits for toxic pollutants in permits. Federal permit regulations (40 CFR 122.44(d)(1)(vi); 40 CFR 123.25) require that each permit contain effluent limits for toxic pollutants when a pollutant has reasonable potential to cause or contribute to an excursion above a state's narrative standard. The basis for such limits could include EPA's 304(a) criteria guidance or other appropriate scientific information. Therefore, this approach could result in permit limits that are nearly identical to those that would result from implementation of CTR-based numeric standards, which are also based on the latest available scientific information.

BASELINES FOR ESTIMATING BENEFITS AND COSTS

Analysis of the potential benefits and costs associated with implementing the CTR requires that a baseline be established. The baseline describes what would occur in the absence of a regulation and provides an initial starting point for measuring the incremental cost and benefit of regulatory compliance.

EPA established potential compliance costs under two scenarios of pollutant loadings from point source dischargers. For a low cost scenario, EPA established pollutant loadings based on effluent data, specifically, the maximum effluent concentration reported in the most recent three years of monitoring data. However, if this value exceeded an existing permit limit for a given pollutant (i.e., showing the facility to be out of compliance), EPA used the permit limit as the discharge concentration. As a high scenario, EPA established pollutant loadings based on effluent data or the existing permit limit if no data were available. EPA developed these scenarios to reflect the uncertainty associated with establishing existing levels of pollutants in the effluents of point source dischargers given the limitations of current analytical methods. That is, because the CTR criteria are often below current analytical detection levels, it can be difficult to determine whether a facility may face incremental costs under the rule.

Establishing a baseline for estimating potential benefits proved more difficult because EPA does not have information on water quality conditions that would result from implementation of all current regulations and programs designed to control toxic pollutants. Therefore, EPA established a water quality baseline using information on current conditions using California's Water Quality Assessment (WQA) database, a database developed and maintained by the SWRCB. The WQA database contains information on pollutants that adversely affect water quality in water bodies that have been evaluated, the sources of these pollutants, the beneficial uses impaired, and a rating of water quality. The WQA database used for the analysis was updated in 1994 and is described in detail in U.S. EPA (1996). To identify the extent to which California waters are impaired by the toxic pollutants addressed by the CTR, EPA relied on the WQA ratings of good, medium, and poor. EPA defined impaired waters for this analysis as those that are rated medium or poor for one or more toxic pollutants addressed by the CTR [although, as described in U.S. EPA (1996), an exact matching of the WQA database to the pollutants addressed by the CTR was not possible].

EPA also obtained baseline information related to potential benefits from California's Toxic Substances Monitoring Program (TSMP). The TSMP monitors the occurrence of toxic pollutants in California's waters through sampling and analysis of fish tissue and contains freshwater tissue samples collected throughout the state. Fish tissue contaminant levels also were obtained from EPA's 1992 National Study of Chemical Residues in Fish and from a 1994 study by the San Francisco RWQCB, Contaminant Levels in Fish Tissue from San Francisco Bay. These sources also are described in detail in U.S. EPA (1996).

ANALYSIS OF COSTS

The method used to estimate potential compliance costs associated with the final CTR is generally the same as that used to estimate costs of the proposed rule. However, to address comments raised during the public comment period, EPA gathered additional data and information to refine the analysis of potential costs and pollutant loading reductions. A large part of the effort was directed toward obtaining the most recent NPDES permits and effluent monitoring data. Efforts also were directed toward increasing the sample size of minor wastewater treatment plants and minor industrial facilities.

EPA's method involved developing detailed estimates of the potential impact of the CTR on a sample of point source dischargers to California's inland waters and enclosed bays and estuaries and then extrapolating these results to the universe of potentially affected facilities. The impact of the CTR will vary depending upon the procedures that will be used to implement the criteria. These procedures typically specify the methods for assessing the need for water quality based effluent limits (WQBELs) and, if WQBELs are required, the method for deriving WQBELs from applicable water quality criteria. For this analysis, EPA derived WQBELs using implementation procedures based on the methods recommended in the Technical Support Document for Water Quality-based Toxics Control (TSD) (U.S. EPA, 1991).

Where reasonable potential was determined for a pollutant at a facility, EPA calculated a projected CTR-based WQBEL in accordance with the TSD procedures. If the existing NPDES limit was more stringent that the CTR-based limit, then no cost or load reductions were assigned to the facility. However, if the CTR-based limit was more stringent than the existing NPDES permit limit, or, in the absence of a existing limit, if the CTR-based limit was more stringent than the maximum observed effluent concentration, EPA estimated the cost that the facility would likely incur to meet the more stringent limit. To estimate these costs, EPA established a decision framework to ensure consistency in selecting control options.

Changes to the Methodology

In analysis of the final CTR, EPA revised its methodology for calculating a projected effluent quality (PEQ) to address mathematical problems encountered due to limited data sets for some facilities. Based on a review of the available data, EPA determined that using one-half of the method detection level instead of "zero" for non-detects resulted in a more accurate coefficient of variation. Furthermore, if greater than 20 data points were available for a pollutant, the 99th percentile value was calculated from the data set to represent the PEQ.

Changes to the methodology also included revisions to the treatment process optimization costs and waste minimization/pollution prevention cost estimates. Because process modification costs are expressed as a range of values, the costs assigned for a facility were proportional to the flow to be treated and the loading reduction required. For waste minimization/pollution prevention, the cost for POTWs with a design flow greater than five MGD was increased from $400,000 to $2 million in the high scenario. This new cost, replacing the previous average per facility cost of $100,000, is the highest pollution prevention cost estimate derived by EPA in assessing of

compliance costs resulting from implementation of the proposed Great Lakes Water Quality Guidance (SAIC, 1993).

EPA also eliminated the use of a cost "trigger" under the high scenario. In analysis of the proposed CTR, EPA used an industrial category threshold of $500/pounds-equivalent (lb-eq) for triggering compliance through regulatory alternatives. (The low scenario used a facility-specific threshold of $200/lb-eq for triggering compliance thru regulatory alternatives.) However, for the final rule, EPA assumed that no regulatory alternatives would be available under the high scenario. In other words, all necessary pollutant reductions were assumed to be achieved through either treatment or a waste control program of some type (e.g., waste minimization, pollution prevention).

Finally, EPA revised its estimate of the number of indirect dischargers that may be affected by more stringent CTR-based WQBELs applied to POTWs. EPA estimated that there are 2,144 SIUs that discharge to POTWs located on California inland surface waters and enclosed bays and estuaries. Previously, EPA assumed that 30% of these SIUs would be impacted under the low scenario and 10% would be impacted under the high scenario. Based on comments received indicating that the number of facilities affected was understated, EPA increased these percentages to 70% for the low scenario and 30% for the high scenario. (The percentage of SIUs impacted under the low scenario is greater than under the high scenario because the low scenario relies more heavily on source controls as a low-cost control option.) However, EPA believes that these revised assumptions are unrealistic and that the original 30% and 10% estimates more closely reflect the likely impact.

Results

EPA estimates that the potential annual cost of implementing the CTR is approximately $33.5 million under the low scenario and $61.0 million under the high scenario. As shown in **Exhibit ES-1**, indirect dischargers bear most of these costs in the low scenario. Under the high scenario, direct dischargers are expected to incur most of the potential costs. However, EPA believes that the high scenario likely overstates potential costs because it reflects the use of conservative (i.e., tending to err on the high side) assumptions. Specifically, under the high scenario, EPA estimates potential costs based solely on the presence of a WQBEL in a permit (as opposed to having monitoring data to show that the pollutant is actually there) and assumes that regulatory alternatives will not be used to mitigate excessive cost impacts.

Under the low scenario, where the baseline represents existing effluent concentrations, the expected reduction in pollutant loadings resulting from implementation of the CTR is approximately 1.1 million toxic lb-eq per year, or 50% of the baseline load of 2.2 million toxic lb-eq per year. Under the high scenario, the expected reduction in pollutant loadings is approximately 2.7 million toxic lb-eq per year, or 15% of the baseline load of 18.5 million toxic lb-eq per year.

Exhibit ES-1. Summary of Potential Annualized Costs (Millions of 1998 First Quarter Dollars)

Discharger Category	Low Scenario	High Scenario
Direct Dischargers	$9.9	$50.9
Indirect Dischargers	$23.6	$10.1
Total	**$33.5**	**$61.0**

ANALYSIS OF BENEFITS

EPA developed both a qualitative assessment of benefits and a quantified and monetized assessment of benefits.

Qualitative Assessment of Benefits

Toxics reductions under the CTR may provide ecologic benefits through increased ecosystem stability, resilience, and overall health. The potential benefits are difficult to quantify because of the complexity, scale, and uncertainties of the interaction of the multitude of ecological systems and toxics to be affected by the final rule. However, because of the extensive variety, proportion, and geographic area of the affected aquatic systems, the diversity and uniqueness of California ecological resources, and the large number of toxics to be regulated under the CTR, these benefits may be substantial, including (U.S. EPA, 1997):

- Reductions in toxics loadings that lead to improved conditions for California fish spawning and/or migration in bays/harbors and estuaries, lakes, rivers, streams, and saline lakes

- Reductions in bioaccumulative chemicals of concern that currently may affect fish and wildlife throughout the state, including selenium, mercury, PCBs, dioxins, and chlorinated pesticides

- Reductions in toxics that improve conditions for the successful recovery of federal and state threatened and endangered species, such as the delta smelt, desert pupfish, California brown pelican, bald eagle, California clapper rail, California tiger salamander, and western snowy plover

- Reductions in toxics that decrease adverse toxics-related impacts on aquatic and terrestrial wildlife in two important areas of California: the San Francisco Bay watershed and the Central Valley (see case studies in U.S. EPA, 1997)

- Reductions in the concentrations of both selenium and pesticides in the waters that feed the Salton Sea that may improve conditions for the restoration and maintenance of currently declining populations of wildlife, including threatened and endangered species such as the California brown pelican, peregrine falcon,

bald eagle, Yuma clapper rail, and desert pupfish (see Case Studies in U.S. EPA, 1997)

- Improved water quality and associated improvements in survival, growth, and reproductive capacity of aquatic and aquatic-dependent organisms that will help restore and sustain California's ecological diversity.

Quantified and Monetized Assessment of Benefits

EPA's method for estimating the potential benefits of the CTR closely resembles the method used in evaluation of the proposed CTR (the results have been updated to incorporate the revised estimates of pollutant loading reductions and a slight modification to how the reductions are incorporated). EPA quantified and monetized three categories of potential benefits: (1) human health risk reductions, (2) recreational angling benefits, and (3) passive use values. However, in response to comments, EPA conducted additional searches to identify California-specific literature related to the contribution of point sources to the toxic-related water quality problems in California and the values held by California residents for reducing toxic contamination in the state's waters. EPA incorporated the results of these searches into this analysis. Also, where possible, EPA updated the data underlying the analysis.

Contribution of Point Sources to Total Toxic Loadings

EPA's method for estimating potential benefits generally involved estimating the value of eliminating toxic impairment from California waters and then determining the extent to which the potential loadings reductions associated with the CTR might contribute to that value. For this analysis, EPA assumed that there was a direct linear relationship between the estimated reduction in toxic-weighted pollutant loadings and potential benefits (although this assumption may or may not be correct). EPA also developed assumptions regarding the relative share of total toxic loadings to California waters that are attributable to point sources. These estimates are shown in **Exhibit ES-2** and represent the toxic-weighted average across the pollutants evaluated.

ES-2. Estimated Share of Total Toxic Pollutant Loadings Attributable to Point Sources for California Water Bodies

Water Body	Toxic Pollutant Loadings Attributable to Point Sources (%)
San Francisco Bay	1-10
Other bays and estuaries	42–64[1]
Freshwaters and saline lakes	3

[1] The lower-bound estimate is for nonurban bays and the upper-bound estimate is for urban bays.
Source: Based on EPA analysis of NOAA (1988a); NOAA (1988b); NOAA (1988c); Davis, et al. (1991); California RWQCB (1997); Central Valley RWQCB; and California 1994 WQA database, as originally presented in U.S. EPA (1997).

Human Health Benefits

EPA assessed the human health risks from the consumption of contaminated fish tissue, and the potential reductions in these risks for two populations of anglers: San Francisco Bay anglers and freshwater anglers in California. EPA conducted the assessment for San Francisco Bay anglers as a case study example of the health risks for anglers fishing in enclosed bays and estuaries. However, because only two other health advisories have been issued for enclosed bays and estuaries in California, this case study may represent an upper-bound estimate of baseline health risks associated with enclosed bays and estuaries.

EPA assessed baseline human health risks (cancer and systemic effects) based on reported contaminant levels in fish tissue samples collected from San Francisco Bay and freshwater fisheries throughout California. The approach used follows standard EPA methodology for estimating health risks as described in detail in U.S. EPA (1997). EPA then estimated the potential reduction in baseline risk levels that might result from implementation of the CTR, considering the relative contribution of point sources to the contamination problem.

Exhibit ES-3 presents the potential reductions in cancer risks for recreational anglers. EPA estimated reductions in statistical cancer cases for anglers with average consumption rates. The lower-bound estimate of reductions in statistical cancer cases is less than one because the lower-bound estimates of statewide loadings reductions for all carcinogens that accumulate in fish is small. Using an estimated value of a statistical life of $2.7 million to $9.6 million (American Lung Association, 1995, updated to 1998 first quarter dollars using the Consumer Price Index) and assuming that all cancers are fatal, potential human health benefits of reduced cancer cases in recreational anglers range from $0.10 million to $4.20 million per year.

Exhibit ES-3. Potential Human Health Benefits of Reducing Cancer for Recreational Anglers[1]

Water Body	Annual Reduction in Cancer Cases	Annual Monetized Benefits (millions of 1998 first quarter dollars)[1]
San Francisco Bay	0.04 - 0.05	$0.10 - $0.45
Freshwater Resources	0.44	$1.17 - $4.20

[1] Based on an average consumption rate (21.4 g/day) and a value of a statistical life of $2.7 million to $9.6 million (American Lung Association, 1995, updated to 1998 first quarter dollars using the CPI). Values based on the estimates of reductions in fish tissue concentration contamination. Note that there is currently a debate regarding the accuracy of the CPI.

Systemic (noncancer) risks are assessed by means of a hazard quotient (HQ) for each contaminant. A HQ of one or greater implies that chronic chemical exposures exceed EPA-established thresholds of toxicity, and are indicative of potential for adverse health effects. For PCBs, EPA expects the hazard quotient associated with the average consumption rate to be reduced from 2.26 to a range of 1.51-1.66 for San Francisco Bay anglers and from 1.40 to 1.01 for freshwater anglers. However, for high consumers (90th percentile), the HQ for PCBs is expected to be reduced from 11.31 to a range of 7.54-8.29 for San Francisco Bay anglers and from 7.02 to 5.04 for freshwater anglers.

EPA estimated that the HQ for mercury will be reduced for both the average and 90th percentile consumption rates, however baseline levels exceed 1.0 for high consumers only. For high fish consumers (90th percentile), EPA expects the HQ for mercury to be reduced from 3.77 to a range of 1.01-1.11 for San Francisco Bay anglers and from 3.12 to 0.90 for freshwater anglers.

Recreational Angling Benefits

In addition to health risks, concerns regarding adverse health effects from eating contaminated fish also may reduce the value of the recreational fishery because the ability to consume fish may be an important attribute of the overall fishing experience (Knuth and Connelly, 1992; Vena, 1992; FIMS and FAA, 1993; West et al., 1993). This reduction in value may occur because fewer fishing trips are taken or because the value of a trip is reduced. In addition, reduced toxic contamination may increase stability, resilience, and overall health of numerous ecosystems, which may increase catch rates as well as angling effort in California. Thus, the potential recreational benefits of the CTR may include an increase in the value of fishing experiences and an increase in participation.

Because the analysis of recreational angling value is conducted at the statewide level and does not consider numerous site-specific characteristics that will affect the level of benefits from the rule, the results are only intended to provide a rough approximation of the potential magnitude of recreational benefits. A case study approach would be required to more accurately characterize the anticipated angling benefits at any specific water body in California.

Increased Value of Existing Trips. EPA was unable to identify any studies regarding the value to California anglers of reducing toxic contamination of surface waters to help estimate the value of

an improved fishing experience. However, a 1992 study of the Wisconsin Great Lakes open water sport fishing (Lyke, 1993) does reveal the significance of the contamination problem to the anglers. Lyke estimated the value of the Great Lakes trout and salmon fishing to anglers if it were "completely free of contaminants that may threaten human health." Lyke's estimates indicate benefits of 11% to 31% of the value of the fishery.

To transfer the Lyke results, EPA first estimated the number of fishing days in California that occur in toxic-impaired waters, distinguishing between water body type (e.g., freshwater river versus saltwater). Next, EPA multiplied the number of fishing days by an average consumer surplus for the different modes of fishing to obtain a baseline value of the fishery. EPA then multiplied by Lyke's estimate of 11% to 31% to obtain the value of a "contaminant-free" fishery. Finally, EPA multiplied by the midpoint of the low and high estimates of expected reduction in loadings and the low and high assumed contribution of point sources to total loadings to obtain the portion of these benefits that may be potentially attributable to point source controls. This approach results in potential benefits of between $1.53 million and $12.99 million per year.

Value of Increased Participation. In addition to increasing the value of existing angling days, reduced toxic loadings also may increase participation levels. Toxic contamination may discourage recreational fishing participation because of concern that consumption is unsafe. Similarly, knowledge of toxic contamination alone, regardless of consumption concerns, may reduce anglers' participation at a given site. Improving water quality to achieve toxic water quality criteria may restore this lost participation.

However, estimating lost participation is difficult and a limited number of studies have estimated reductions in participation due to water quality degradation. A thorough review of the literature revealed several studies that estimate the percentage of *people* that would take fewer trips, not the percentage decrease in angling days. However, these anglers are not expected to eliminate trip-taking. Therefore, using the various study results, EPA reasonably assumed that there may be a 5% to 10% reduction in trips attributable to poor water quality. Because public knowledge of toxic contamination varies across water bodies, EPA conservatively assumed a 5% increase in angler participation in estimating the benefits from increased angling participation for all waters except San Francisco Bay. Since a fish consumption advisory was issued for the Bay in 1994, EPA assumed a 10% increase in angler participation for the Bay.

EPA estimated the value of increased angling participation by multiplying the number of toxic-affected fishing days by 5% (10% for San Francisco Bay) and then valuing these days using estimated consumer surplus values. To estimate the portion of these benefits attributable to implementation of the CTR, EPA multiplied by the midpoint of expected reduction in toxic-weighted pollutant loadings and the relative contribution of point sources to total loadings. Potential benefits due to increased participation that may be attributable to the CTR range from $0.7 million per year to $2.2 million per year.

Nonconsumptive Wildlife Recreation Values

The *1996 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation* (U.S. Department of the Interior, Fish and Wildlife Service, and U.S. Department of Commerce, Bureau of the Census, 1998) indicates that 5.96 million California residents aged 16 or older participated in wildlife watching in 1996. This participation included 17.9 million trips away from home (at least 1 mile) for the primary purpose of observing, photographing, or feeding wildlife. These estimates do not include secondary wildlife-watching activities, such as observing wildlife while pleasure driving (U.S. Department of the Interior, Fish and Wildlife Service, and U.S. Department of Commerce, Bureau of the Census, 1998). Approximately 5.7 million California residents aged 16 or older also participated in wildlife-related activities around the home, including observing, photographing, or feeding wildlife.

Research has shown that nonconsumptive wildlife recreation (viewing wildlife) is highly valued. For example, Rockel and Kealy (1991) estimate a total annual value nationwide of between $8.7 billion and $165 billion in 1980 dollars (with the range of results indicating a sensitivity of their model to functional form). Cooper and Loomis (1991) estimated the total annual value for bird viewing in California's San Joaquin Valley to be $64.7 million (in 1987 dollars), based on willingness to pay (WTP) estimates for all Californians. Cooper and Loomis found that WTP increased as the number of birds seen increased, with diminishing marginal returns evident in their results (Cooper and Loomis, 1991).

As described in the EA that accompanied the proposed rule, CTR-related improvements in aquatic habitats may lead to healthier and more diverse populations of avian and terrestrial species and may manifest in increased participation and increased user day values for wildlife viewing activities. Without specific information as to the potential magnitude of changes in wildlife populations and thus viewing opportunities that may result from the toxic pollutant loading reductions anticipated under the rule, nonconsumptive wildlife recreation values cannot be estimated. Given the high baseline value, however, these benefits may be appreciable.

Passive Use (Nonuse) Values

Individuals may value reduced toxic concentrations in California aquatic environments apart from any values associated with their direct or indirect use of the resource. These passive use (nonuse) values are difficult to estimate in the absence of carefully designed and executed contingent value surveys. "Benefits transfer" techniques, however, can be used to develop a rough approximation of the potential magnitude of these passive use values.

Fisher and Raucher (1984) conducted an extensive review of the economics literature providing empirical evidence of the use and nonuse values associated with improved water quality and/or fisheries. Their review indicated that nonuse values are estimated to be *at least* half as great as recreational values. The authors concluded that if passive use values (for example, ecologic values) are applicable to a policy action, using a 50% approximation is preferred, with proper caveats, to omitting passive use values from a benefit-cost analysis. EPA believes his research is

applicable to the CTR. Therefore, EPA estimated passive use values for the CTR as one-half of recreational fishing benefits thus estimating the amount of passive use value that recreational angling households are willing to pay, above their recreational use values, to preserve or enhance water quality. This suggests that the potential magnitude of passive use values associated with implementation of the CTR for households with recreational anglers may range from $1.1 million per year to $7.6 million per year.

EPA also estimated passive use values for nonangling households assuming that passive use values are 30% to 90% of the passive use values held by angling households. Assuming that there are 9.7 million nonangling households in California, EPA anticipates passive use benefits for nonangling households range from $2.3 million to $47.3 million per year.

Summary of Monetized Benefits

A summary of the estimated monetized benefits from implementation of the CTR is provided in **Exhibit ES-4**. Human health benefits are estimated for San Francisco Bay and statewide freshwater resources; all other benefits are estimated statewide.

Exhibit ES-4. Summary of Annual Benefits from Implementation of the CTR (Millions of 1998 First Quarter Dollars)

Benefit Category	Annual Value
Human Health (cancer risk)	
San Francisco Bay	$0.1 - $0.4
Other saltwater resources	+
Freshwater resources	$1.2 - $4.2
Recreational Angling	
Increased value of existing trips	$1.5 - $13.0
Increased participation	$0.7 - $2.2
Wildlife Viewing	+
Passive Use	
Households with recreational anglers	$1.1 - $7.6
Other households	$2.3 - $47.3
Omitted Benefits[1]	+
Total	$6.9 - $74.7

[1] Benefits not monetized include noncancer human health effects, water-related recreation apart from fishing, and consumptive and nonconsumptive land-based recreation.
+: Positive benefits expected but not monetized.

The benefits estimates are subject to a number of omissions, biases, and uncertainties. It is difficult to assess the overall impact of these factors on the estimates because the degree to which they might cause the estimates to be underestimated or overestimated cannot be predicted with accuracy. Among the key factors, however, the omission of potential benefit categories may have the most significant impact and would contribute to an underestimate of benefits. In particular, the inability to quantify and monetize the extent to which the CTR may enhance water-related recreation apart from fishing or consumptive and nonconsumptive land-based

recreation, such as picnicking and hunting, may cause an underestimate of benefits. Although the scope of the benefits analysis has not allowed a quantitative assessment of these values at either baseline or post-CTR conditions, these benefits may be appreciable.

COMPARISON OF BENEFITS AND COSTS

A direct comparison of the monetized annual (steady-state) benefits of the CTR and annualized costs shows benefits and costs to be generally commensurate given the uncertainty in the analysis and that several categories of benefits are unmonetized. As shown in **Exhibit ES-5**, the estimate of monetized benefits ranges from $6.9 million per year to $74.7 million per year. Annualized costs are $33.5 million under the low scenario and $61.0 million under the high scenario.

Exhibit ES-5. Comparison of Annual Potential Benefits and Costs of Implementing the CTR (Millions of 1998 First Quarter Dollars)

Comparison Method	Monetized Benefits	Annualized Costs	
		Low Scenario	High Scenario
Direct Annual Comparison[1]	$6.9 - $74.7	$33.5	$61.0

[1] These monetized costs and benefits are not directly comparable since several categories of benefits have not been monetized.

Because the benefits and costs associated with implementation of the CTR may be characterized by an initial outlay of capital costs and a gradual phase-in of benefits, **Exhibit ES-6** presents a present value of benefits and costs over 30 years. This method applies a present value social accounting in which the streams of future benefits and costs are discounted to their present values to reflect society's rate of time preference. EPA considered two different phase-in scenarios to account for the potential delay in realizing benefits since many of the pollutants addressed by the CTR are persistent in the environment. To the extent that benefits of reducing toxic pollutants under the CTR are realized sooner, these scenarios may result in an underestimate of the present value of benefits. EPA assumed that there is a 7% opportunity cost of capital and that capital is replaced every 10 years. Since the life of capital typically exceeds 10 years, this assumption may result in an overestimate of costs. EPA calculated the present value of the streams of benefits and costs using discount rates of 3% and 7%.

As shown in Exhibit ES-6, discounted costs fall within the range of discounted benefits under the low scenario, but discounted costs exceed discounted benefits in three of the four cases shown for the high scenario. However, the assumption that capital is replaced every 10 years likely overstates costs. At the same time, benefits may be understated because some categories are not monetized and full benefits may be realized sooner than 10 or 20 years. Thus, EPA expects that the present value of benefits and costs is more commensurate than shown.

Exhibit ES-6. Comparison of Discounted Benefits and Costs of Implementing the CTR (Millions of 1998 First Quarter Dollars)[1]

Schedule of Benefits	Benefits[2]	Costs[3]	
		Low	High
3% Discount Rate			
10-Year Phase-In of Benefits	$108-$1166	$617	$1033
20-Year Phase-In of Benefits	$82-$883	$617	$1033
7% Discount Rate			
10-Year Phase-In of Benefits	$63-$683	$421	$767
20-Year Phase-In of Benefits	$45-$480	$421	$767

[1] Present values over 30 years.
[2] Benefits are phased in proportionately over 10 and 20 years, and have their full value in the remaining years. Benefits are not directly comparable to costs since several categories of benefits have not been monetized.
[3] Reflects capital costs plus a 7% cost of capital in years 1, 11, and 21, operating and maintenance costs in years 2 through 30.

CONCLUSIONS

Comparison of annual values of benefits and costs resulting from implementation of the CTR shows estimated costs falling within the range of monetized benefits. Comparison of 30-year present values of benefits and costs also shows costs under the low scenario to fall within the range of monetized benefits although costs under the high scenario generally fall just outside this range. However, EPA believes that benefits may actually be higher than shown because some categories of potential benefits have not been quantified or monetized. EPA was not able to quantify or monetize potential improvements in water-related recreation apart from fishing, such as boating, swimming, picnicking, and related in-stream and stream-side recreational activities. EPA was also unable to quantify or monetize potential improvements in wildlife viewing. Research indicates that wildlife viewing is a highly valued activity and that California residents value reductions in toxic pollutants that may affect wildlife resources. Thus, these omissions may result in an underestimate of benefits. In addition, using a capital life of 10 years likely overestimates potential compliance costs.

1.0 INTRODUCTION

This document presents the U.S. Environmental Protection Agency's (EPA or the Agency) economic analysis of the California Toxics Rule (CTR), a regulatory action that establishes numeric water quality criteria for priority toxic pollutants necessary for the State of California to meet the requirements of the Clean Water Act (CWA).

1.1 BACKGROUND

Under the CWA (33 U.S.C. 1251 et seq.), states have primary authority for establishing designated uses for water bodies and for developing water quality criteria to protect those designated uses. Under Section 303(c)(2)(B) of the CWA, whenever a state adopts new water quality standards, or reviews or revises existing water quality standards, it must adopt numeric water quality criteria for priority toxic pollutants (as defined by Section 307(a) of the CWA and for which the Agency has issued a criteria guidance document per Section 304(a) of the CWA) if the absence of such criteria could reasonably be expected to interfere with a designated use of a water body.

In April 1991, California adopted two statewide water quality control plans, the Inland Surface Waters Plan (ISWP) and the Enclosed Bays and Estuaries Plan (EBEP) establishing water quality criteria for the state, in part, to comply with Section 303(c)(2)(B). In November 1991, EPA disapproved some portions of each plan. In December 1992, EPA promulgated the National Toxics Rule (NTR) (57 FR 60848, December 22, 1992) for several states that had not yet met the requirements of the CWA, including the State of California for those portions of the statewide plans that it had disapproved.

Shortly after the ISWP and EBEP were adopted, several parties filed lawsuits in State Court against the California State Water Resources Control Board (SWRCB) for not complying with state law when the two statewide water quality plans were adopted. In March of 1994, the State Court issued a final decision in a consolidated case requiring the SWRCB to rescind the two plans. The SWRCB took formal action to rescind the plans in September of 1994. Since then, the State of California has been without a complete set of water quality criteria for priority toxic pollutants: only the criteria promulgated by EPA in the 1992 NTR and criteria in existing Regional Basin Plans (issued by Regional Water Quality Control Boards) remain in effect. The CTR establishes the remaining criteria that will satisfy Section 303(c)(2)(B).

1.2 PURPOSE OF THE ANALYSIS

Under Executive Order (EO) 12866 (58 FR 51735, October 4, 1993), the Agency must determine whether a regulatory action is "significant" and therefore subject to the requirements of the EO [i.e., drafting an Economic Analysis (EA) and review by the Office of Management and Budget (OMB)]. EO 12866 defines "significant" as those actions likely to lead to a rule having an annual effect on the economy of $100 million or more, or adversely and materially affecting a

sector of the economy, productivity, competition, jobs, the environment, public health or safety, or state, local, or tribal governments or communities (also known as "economically significant").

Pursuant to the terms of the order, EPA has determined that the CTR is not a "significant" rule. The CTR establishes ambient water quality criteria which, by themselves, have no impact or effect. In addition, the costs and benefits of the CTR could be negligible since implementation of permits under the CTR may not differ significantly from how the state may implement permits under current law.[1] However, EPA also acknowledges that, in the absence of the rule, current permits that do not contain numeric effluent limitations for toxic pollutants and current effluent concentrations may continue in the future. In this case there may be a cost to some dischargers for complying with new water quality based effluent limitations after those standards are translated into permit limits. Therefore, consistent with the intent of EO 12866, EPA developed this EA. EPA intends for the EA to inform the public about how entities might be affected by implementation of CTR-based water quality standards in the National Pollutant Discharge Elimination System (NPDES) permit program.

The State of California has significant flexibility and discretion as to how it chooses to implement the CTR within the NPDES permit program. EPA's analysis assumes implementation procedures based on a combination of EPA guidance and current permit conditions for the facilities examined. This is appropriate because if the state does not adopt statewide implementation provisions, the CTR-based water quality standards would be implemented using existing state basin plan provisions, and EPA regulations and guidance. However, a more precise measure of costs and benefits may not be known until the state adopts its implementation provisions.

This analysis develops revised estimates of the potential benefits and costs associated with implementing the CTR. EPA revised its analysis in response to comments on the EA that accompanied the proposed rule and to reflect more recent data and information collected and used to refine the analysis of benefits and costs. These data and analyses are described in detail in the chapters that follow.

[1] That is, currently, even without this rule, the state could rely on its narrative toxicity standard and implementation of the standard using best professional judgment to set numeric water quality-based effluent limits for toxic pollutants in permits. Federal permit regulations (40 CFR 122.44(d)(1)(vi); 40 CFR 123.25) require that each permit contain effluent limits for toxic pollutants when a pollutant has reasonable potential to cause or contribute to an excursion above a state's narrative standard. The basis for such limits could include EPA's 304(a) criteria guidance or other appropriate scientific information. Therefore, this approach could result in permit limits that are nearly identical to those that would result from implementation of CTR-based numeric standards, which are also based on the latest available scientific information.

1.3 STRUCTURE OF THE REPORT

This document identifies the need for the regulation, assesses potential costs and benefits, and analyzes alternative regulatory options. Wherever possible, the costs and benefits are expressed in monetary terms. The report is organized as follows:

- **Chapter 2, Need for the Regulation**, discusses the statutory requirement for the rule and the nature of the environmental problems caused by the presence of toxic pollutants in California waters that are regulated by the rule.

- **Chapter 3, Baseline for Estimating Benefits and Costs**, describes the baseline for analysis of the potential incremental benefits and costs of the rule.

- **Chapter 4, Analysis of Costs and Cost-Effectiveness**, describes the methodology for estimating potential costs and the results of the cost analysis.

- **Chapter 5, The Benefits Associated with the CTR: Methods and Concepts**, provides a discussion of concepts applicable to the analysis of benefits.

- **Chapter 6, Qualitative Assessment of Potential Ecological Benefits**, describes the types of ecological benefits anticipated to result from state implementation of the CTR.

- **Chapter 7, Benefits Methodology Issues: Contribution of Point Sources to Toxics-Related Water Quality Problems**, describes the method used to develop estimates of the potential contribution of point sources to toxic-related water quality problems.

- **Chapter 8, Quantified and Monetized Benefits Estimates**, presents the analysis of quantified and monetized benefits resulting from state implementation of the CTR.

- **Chapter 9, Comparison of Potential Benefits to Costs**, compares the potential benefits and costs estimated in the previous chapters.

- **Chapter 10** provides references.

- **Appendix A, Alternatives Analysis**, provides estimates of the potential cost and cost-effectiveness of two alternative regulatory options considered but not selected for the CTR: a less stringent human health risk level and applying toxic metals criteria in total recoverable form.

- **Appendix B, Compliance Cost Decision Matrix**, describes the assumptions EPA used to develop a forecast of how facilities may comply with limits established under the CTR.

- **Appendix C, Detailed Cost Estimates,** provides additional details on the estimated costs.

2.0 NEED FOR THE REGULATION

This chapter discusses the statutory authority for the CTR and the environmental factors that indicate a need for water quality criteria for toxic pollutants for California inland surface waters and enclosed bays and estuaries.

2.1 STATUTORY REQUIREMENT

Section 303(c)(2)(B) of the CWA requires states to adopt numeric water quality criteria for priority toxic pollutants for which EPA has issued Section 304(a) criteria guidance and whose presence could reasonably be expected to interfere with designated uses. Priority toxic pollutants are identified in Section 307(a) of the CWA. The CTR establishes numeric water quality criteria for priority toxic pollutants for the State of California that fulfill the requirements of Section 303(c)(2)(B).

EPA is promulgating this rule to fill a gap in California water quality standards. This gap resulted when the California Superior Court for the County of Sacramento ordered the SWRCB to rescind two statewide water quality control plans for inland surface waters and enclosed bays and estuaries. These plans contained water quality criteria for priority toxic pollutants for which EPA had issued CWA Section 304(a) criteria guidance. Thus, the State of California is currently without water quality criteria for many priority toxic pollutants as required by the CWA, necessitating this action by EPA.

When these federal criteria take effect, they will be the legally applicable water quality standards in the State of California for inland surface waters and enclosed bays and estuaries. The State will use these standards for all purposes and programs under the CWA. These criteria do not change or supersede any criteria previously promulgated for the State of California in the NTR, as amended (57 FR 60848, December 22, 1992, as amended by 60 FR 22228, May 4, 1995).

2.2 AN OVERVIEW OF ENVIRONMENTAL CONCERNS

The CTR addresses important environmental problems in California water bodies. Control of toxic pollutants in surface waters is necessary to achieve the CWA's goals and objectives. Many of California's monitored river miles, lake acres, and estuarine waters have elevated levels of toxic pollutants. Recent studies of California water bodies indicate that elevated levels of toxic pollutants exist in fish tissue; these discoveries have resulted in fishing advisories or bans.

Toxic pollutants covered by the CTR impair many of California's surface water resources. For this assessment, EPA has defined "impaired" waters as those that have been assessed and rated by the State of California as having medium or poor water quality for at least one toxic water quality pollutant or groups of pollutants. EPA has further defined "impaired" as meaning at least one designated use shows some degree of impairment. Information provided in this assessment, together with other data sources, indicates that toxic pollutants or groups of pollutants adversely

affect large areas of surface water in California and their associated beneficial uses. According to U.S. EPA (1997), major impacts include the following:

- Available data suggest that over 800,000 acres of assessed bays, estuaries, lakes, and wetlands may be impaired by one or more toxic pollutants, as are over 3,700 miles of rivers. Most notably, more than two-thirds of the assessed area of both bays and saline lakes may be adversely affected by toxic pollutants.

- Inorganic pollutants such as metals and trace elements (particularly selenium) are the most significant categories of toxic pollutants affecting the water quality in assessed waters statewide. Pesticides are also associated with large areas of water quality impairment.

- On the basis of the areal extent of contamination and the uses of affected water bodies, San Francisco Bay and the Central Valley appear to be the areas most influenced by toxic contamination. In addition, toxic pollutants are responsible for impaired water quality in a high percentage of river and saline lake areas in the Colorado River Basin. These areas constitute those most extensively affected by toxic pollutants, but waters in all regions of California show some degree of impairment by toxics.

- Both point and nonpoint sources play a role in contributing to toxic pollution. Agriculture, primarily agricultural drainage, is the most frequently cited source of pollutants that impair rivers and is also frequently cited as a contributor to impaired lakes and reservoirs. Urban runoff and other nonpoint sources (e.g., deposition, spills) are most frequently cited as contributing factors to water quality problems in toxics-impaired bays. Mining also is a frequently cited source (mining operations may or may not be a point source), particularly for lakes and reservoirs, and toxic pollutants discharged by municipal wastewater treatment plants contribute to the impairment of a variety of water body types, particularly estuaries and wetlands.

- Currently, there are 12 fish consumption health advisories in waters covered by the CTR (9 inland water bodies and 3 enclosed bays and estuaries) because of high levels of contamination in fish tissue by mercury, PCBs, chlordane, dioxin, DDT, pesticides, and selenium. The advisories range from avoiding consumption of all species to limiting consumption of a few species to several meals per month. In addition, the state has four waterfowl health warnings for consuming waterfowl taken from the Grasslands area, Suisun Bay, San Pablo Bay, and San Francisco Bay based on elevated selenium levels in duck, greater and lesser scaup, and scoters.

3.0 BASELINE FOR ESTIMATING BENEFITS AND COSTS

An analysis of the potential benefits and costs associated with implementing the CTR requires that a baseline be established. The baseline describes what would occur in the absence of a regulation and provides an initial starting point for measuring the incremental cost and benefit of regulatory compliance. This chapter describes the baseline EPA established for analyzing the potential costs and benefits anticipated under the CTR. It also discusses other sources of toxic pollutants, and thus potential benefits and costs relevant to the CTR, that EPA did not address in this analysis.

3.1 POINT SOURCE DISCHARGES

The CTR establishes criteria for all designated priority toxic pollutants, except those addressed in the NTR, for California inland surface waters and enclosed bays and estuaries. EPA analyzed the potential benefits and costs for point source discharges to comply with these criteria. To do this, EPA used a sample of facilities to represent the universe of all California point source dischargers. To establish baseline permit limits, effluent concentrations, and controls, EPA obtained the most recent NPDES permit and monitoring data available for point source dischargers. Sources of monitoring data included EPA's Permit Compliance System (PCS), hard-copy Discharge Monitoring Reports (DMRs), the nine Regional Water Quality Control Boards (RWQCBs), and the sample facilities. EPA used the most recent 3-year period of data available for each facility to evaluate the potential impact of the CTR.

3.1.1 Baseline Effluent Concentration

EPA established baseline effluent concentrations for pollutants determined to have a reasonable potential to exceed the projected CTR-based limit under two scenarios. For a low scenario, EPA considered only those pollutants that had been detected in the effluent during the past 3 years. EPA then used the maximum effluent concentration reported in the most recent 3 years of monitoring data as the baseline pollutant discharge concentration. However, if this value exceeded an existing permit limit for a given pollutant, EPA used the permit limit as the baseline discharge concentration.

As a high scenario, EPA established baseline effluent concentrations as being equal to existing permit limits, whether or not the pollutant had been detected in the effluent. This typically provides an upper bound on discharge concentrations because most facilities discharge at a level below their current limit. However, if there was no permit limit for a priority pollutant, the maximum effluent concentration was used as the baseline for those pollutants found to have reasonable potential to exceed the projected CTR-based limit based on effluent data.

Thus, the low scenario provides a more likely scenario of the pollutants for which reasonable potential would be determined because it is based on actual data indicating that the pollutants are present in the effluent. In comparison, the high scenario provides an upper bound on the

pollutants for which reasonable potential could exist. That is, pollutants are included in the high scenario analysis if the facility currently has an effluent limit for the pollutants even if there are no data to indicate that they are present in the effluent. There are many more pollutants considered in the high scenario than in the low scenario. One reason for this is that California's inland surface water plan (now rescinded) required permit limits to be established for all pollutants in the plan regardless of whether or not there was effluent data indicating their presence in the effluent. As a result, many facilities, including minor facilities, have limits for pollutants not detected in their effluent.

3.1.2 Baseline Pollutant Controls

EPA established the baseline for analysis of the pollutant controls necessary to meet projected CTR-based limits using the treatment systems in place at the sample facilities as described in the facility's NPDES permit. This baseline was used even in cases in which the existing maximum effluent concentration exceeded the existing permit limit at a facility. In theory, this assumption could result in overstating the pollutant controls necessary to meet the CTR-based limits if additional treatment were required to come into compliance with existing limits. However, in practice, only small differences were observed between current limits and maximum effluent concentrations.

3.2 WATER QUALITY

One of the most challenging analytic problems faced in estimating potential benefits attributable to implementation of the CTR is the need to account for the appropriate water quality baseline. A benefits analysis, for the most part, is able to measure improvements only from current or observable conditions. However, the appropriate baseline should account for water quality as it occurs assuming all current programs and legal requirements under the CWA, and other statutes or initiatives, are met. Therefore, there is an important distinction between current conditions and the conditions that reflect full implementation of existing programs.

An empirical approach to estimating the benefits relevant strictly to the CTR would be to estimate the reductions in toxic pollutant loadings from current conditions to the CTR-relevant baseline and then from this baseline to conditions following CTR implementation. EPA estimated pollutant loadings and reductions from the CTR-relevant baseline to conditions following implementation. These estimates indicate that the CTR may have a significant impact relative to loadings at its baseline. However, there is no empirical information with which to discern how this reduction compares to the difference between current conditions and conditions that reflect full implementation of existing programs.

Because EPA does not have information on water quality conditions under the CTR-relevant baseline, EPA established a water quality baseline using information on current conditions. EPA used several sources of information in this analysis, including California's Water Quality Assessment (WQA) database, a database developed and maintained by the SWRCB. The WQA database contains information on pollutants that adversely affect water quality in water bodies

that have been evaluated, the sources of these pollutants, the beneficial uses impaired, and a rating of water quality. The WQA used for this analysis was updated in 1994. This analysis is described in detail in U.S. EPA (1997); the results are summarized briefly in Chapter 2.

To identify the extent to which California waters are impaired by the toxic pollutants addressed by the CTR, EPA relied on the WQA ratings of good, medium, and poor. Good quality waters are defined in the WQA as waters that support and enhance designated beneficial uses. Medium quality waters are those that support designated beneficial uses with occasional degradation and include waters suspected to be poor where available data are inadequate to allow a definitive conclusion. Poor waters are those that cannot reasonably be expected to support designated beneficial uses. EPA defined impaired waters for this analysis as those that are rated medium or poor for one or more toxic pollutants addressed by the CTR [although, as described in U.S. EPA (1996), an exact matching of the WQA database to the pollutants addressed by the CTR was not possible].

Another source of baseline information is California's Toxic Substances Monitoring Program (TSMP). The TSMP monitors the occurrence of toxic pollutants in California's waters through sampling and analysis of fish tissue and contains freshwater tissue samples collected throughout the state. Fish tissue contaminant levels also were obtained from EPA's 1992 National Study of Chemical Residues in Fish and from a 1994 study by the San Francisco RWQCB, Contaminant Levels in Fish Tissue from San Francisco Bay. These sources also are described in detail in U.S. EPA (1996).

3.3 COSTS AND BENEFITS NOT ANALYZED

Although in this analysis EPA focused on estimating benefits and costs from controlling point source discharges from NPDES-permitted facilities, EPA believes that a comprehensive watershed approach that addresses all significant sources of problem pollutants may present a more cost-effective compliance approach and may be necessary to achieve water quality standards. However, the total costs of actions necessary to implement a watershed approach in a given area can be adequately estimated only after an in-depth site-specific study of the water body. Therefore, the total costs estimated in this analysis may not result in full attainment of water quality standards in all California water bodies. Accordingly, the benefits estimated here include only those that may occur as a result of loadings reductions from point sources typically subject to numeric water quality-based effluent limits (WQBELs).

The state may ask or require other sources to implement best management practices (BMPs) or to participate in a comprehensive watershed management planning approach. Control strategies for wet weather discharges and nonpoint sources are an important piece of EPA and California's current overall strategy to improve water quality. Many of the programs developed to control wet-weather discharges and nonpoint sources are already in place. Costs due to these programs already have been incurred or will soon be incurred owing to existing federal, state, and local environmental programs. The categories of nonpoint sources and wet weather discharges that are likely to contribute to toxic impairment of water bodies, yet are not always subject to numeric

effluent limits, are described below. Programs to control these types of pollution that need to continue if all California waters are to ultimately meet water quality standards also are described.

3.3.1 Agricultural Runoff

Agriculture is one of the largest sources of pollutants in California. Toxic water quality problems result from the application of fertilizers and pesticides and from the discharge of used irrigation water. Pesticides and fertilizers are carried into water bodies via rain and soil erosion. Irrigation water must be drained from fields resulting in the discharge of pesticides, selenium, metals, and other trace contaminants. This irrigation drainage must be transported to holding ponds, evaporation ponds, local water bodies, or reintroduced to the local irrigation system.

As a result of existing federal and state laws, much research and time has been spent attempting to alleviate the difficult problems caused by agricultural runoff. Unlike most point source discharges, polluted runoff from agricultural lands cannot be effectively diminished by treatment systems. Instead, controls focus on reduction in the use of pesticides and changes in the use of water and land. Improvements in irrigation techniques and the reuse of drainage water on salt-tolerant plants can reduce the amount of polluted drainage. Retirement of agricultural lands that have high levels of salts is another alternative to reducing polluted drainage.

3.3.2 Inactive and Abandoned Mines

California has more than 15,000 inactive, abandoned mines. Only six major NPDES permits have been issued for mine discharges. Although 27 additional mines have been issued minor NPDES permits, the vast number of inactive and abandoned mines is not currently permitted. Acid mine drainage results in the discharge of metals such as cadmium, copper, lead, mercury, and zinc.

Technologies used to control mine discharge include prevention and treatment. Prevention may include diversion of local streams away from reactive material, covering reactive mine waste, mixing reactive waste with limestone to buffer acid, disposing of reactive mine waste underwater to eliminate reaction with air, impounding mine drainage to keep it from entering surface waters, and sealing the mine portal to flood the mine, which suppresses the formation of acid mine drainage. Treatment methods vary depending on the site and extent of pollution and involve control of the mine drainage before it enters surface waters. Treatment techniques include chemical precipitation, ion exchange, construction of wetlands, and evaporation of mine discharge in surface impoundments (California State Water Resources Control Board, 1995).

Efforts are already under way to clean up some mine sites under existing state and CWA requirements (storm water regulations) and Superfund [the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)]. However, in order to reach full compliance with water quality standards, additional assessment and treatment may be necessary for some California water bodies.

3.3.3 Urban Runoff

Urban runoff in California has been shown to be a significant contributor to water quality problems. Urban runoff is currently regulated as an NPDES point source for large towns and as a nonpoint source for medium and small towns. Most cities in California have separate systems for wastewater, which handle normal used water flows, and storm drainage, which divert storm water to prevent flooding. When rainfall picks up pollutants, such as toxic metals and pesticides that accumulate on the ground, storm water drains can carry harmful amounts of these pollutants into rivers, lakes, and bays.

Programs designed to control storm water pollution stress BMPs and also often emphasize pollution prevention (e.g., street cleaning or the reduction in use of pesticides and fertilizers) and public education. Public outreach is designed to address proper use, storage, and disposal of household chemicals, pesticides, oil, and other wastes. Efforts to control urban runoff through BMPs are also under way through both NPDES storm water permits and through nonpoint source planning. For example, under its existing NPDES storm water permit, the cities and counties of the Los Angeles area plan to spend $15 million annually on public education and a program to curb illegal dumping (California State Water Resources Control Board, 1996).

Since some of the sources discussed above are exempt from federal permitting requirements, the State of California must develop alternative strategies and controls to protect or restore water quality that is affected by these sources. The State of California established three general management approaches to address nonpoint source problems in its 1988 Nonpoint Source Management Plan, including voluntary implementation of BMPs, regulatory-based encouragement of BMPs, and waste discharge limitations. In most cases, the RWQCBs decide the mix of options that will be used to address any given nonpoint control problem.

4.0 ANALYSIS OF COSTS AND COST-EFFECTIVENESS

This chapter presents the analysis of the potential costs resulting from implementing the CTR. The method used to calculate costs is generally the same as that presented in SAIC (1997). However, EPA made some changes to the sample and the methodology in response to comments and to improve the analysis. The methodology is described in Section 4.1. Changes to the analysis since proposal of the draft CTR are explained in Section 4.2. The results of the analysis, including costs, pollutant loading reductions, and cost-effectiveness by discharger category, are presented in Section 4.3. Section 4.4 summarizes the sources of uncertainty in the cost analysis.

4.1 METHODOLOGY

As described in SAIC (1997), to estimate potential costs and pollutant loading reductions attributable to implementation of the proposed CTR, and for the final CTR, EPA developed detailed estimates for a sample of point source dischargers to California's inland waters and enclosed bays and estuaries, and then extrapolated these results to the universe of potentially affected facilities. The population of NPDES-permitted facilities that discharge into inland surface waters and enclosed bays and estuaries in California includes 184 major dischargers and 1,057 minor dischargers. EPA selected 16 major dischargers and 11 minor dischargers to represent the various discharger categories and geographic distribution of the universe of facilities.

EPA then estimated the potential impact of the CTR on these sample facilities, as described below. The impact of the CTR will vary depending upon the procedures that will be used to implement the criteria. These procedures typically specify the methods for assessing the need for WQBELs and, if WQBELs are required, the method for deriving WQBELs from applicable water quality criteria. For this analysis, EPA derived WQBELs using implementation procedures based on the methods recommended in the Technical Support Document for Water Quality-based Toxics Control (TSD) (U.S. EPA, 1991).

4.1.1 Method for Determining Reasonable Potential to Exceed CTR Water Quality Criteria

The NPDES permit regulations in 40 CFR 122.44(d) and 123.25 require that WQBELs be derived for toxic pollutants that are discharged at a level that has a reasonable potential to cause or contribute to an exceedance of water quality standards. To determine whether there is reasonable potential with respect to projected CTR-based limits, EPA followed several conventions. First, for those toxic pollutants for which limits are already established in a facility's current permit, EPA assumed that a reasonable potential existed. Second, for those pollutants with no limit in the existing permit but that were detected in the effluent (as reported in the permit application or as a result of monitoring conditions contained in the NPDES permit), EPA determined reasonable potential using the method recommended in EPA's TSD, described below. Finally, if all monitoring data for a facility were reported as below analytical detection

levels, even if the reported detection limit was above EPA-approved analytical method detection levels, EPA assumed that no reasonable potential existed to exceed CTR-based WQBELs.

Where data indicated that a pollutant was present, but no current permit limit had been developed, EPA calculated the projected effluent quality (PEQ) and compared it to projected CTR-based WQBELs for all pollutants of concern. A PEQ is an estimate of the maximum effluent pollutant concentration that is derived from actual measured values taking into account statistical uncertainty. EPA calculated a projected CTR-based WQBEL using all applicable CTR criteria (based on protection of aquatic life and human health) and compared the PEQ to the most stringent of the calculated CTR-based WQBELs. If the PEQ exceeded the projected CTR-based WQBELs, EPA concluded that there is reasonable potential to exceed a CTR-based WQBEL. Pollutants for which EPA determined reasonable potential existed were then analyzed to determine potential controls necessary to achieve the CTR-based WQBEL.

4.1.2 Method for Estimating Potential Costs

Where reasonable potential was determined for a pollutant at a facility, EPA calculated a projected CTR-based WQBEL in accordance with the TSD procedures. If the existing NPDES limit was more stringent than the CTR-based limit, then no cost or load reductions were assigned to the facility. However, if the CTR-based limit was more stringent than the existing NPDES permit limit, or, in the absence of an existing limit, if the CTR-based limit was more stringent than the maximum observed effluent concentration, EPA estimated a cost that the facility would likely incur to meet the more stringent limit.

To estimate costs, EPA performed an engineering analysis of how each sample facility could comply with the projected CTR-based effluent limits. The costs to meet the projected CTR-based limit were performed under two different costing scenarios using a "compliance cost-decision matrix," developed to predict how a facility would likely achieve the requisite pollutant reduction. EPA developed this matrix to ensure consistency in estimating the general types of controls that would be necessary to comply with the CTR's more stringent requirements, as well as to integrate other alternatives into the cost analysis. The matrix establishes specific rules to provide reviewing engineers with guidance in consistently selecting options. This matrix is presented in Appendix B.

Under the decision matrix, EPA first considered costs for relatively minor treatment plant operation and facility changes. EPA considered minor, low-cost modifications or adjustments of existing treatment feasible if the literature indicated that the existing treatment process could achieve the revised WQBEL and if the additional pollutant reduction was relatively small (e.g., 10% to 25% of current discharge levels).

When it was not technically feasible to simply adjust existing operations, EPA considered a control strategy of waste minimization/pollution prevention. However, EPA estimated costs for these controls only when they were considered feasible based on the reviewing engineer's understanding of the treatment processes at a facility. The decision matrix established several

rules of thumb for this determination. These rules considered the level of pollutant reduction achievable through waste minimization/pollution prevention techniques, the appropriateness of waste minimization/pollution prevention for the specific pollutant, and knowledge of the manufacturing processes generating the pollutant of concern. In general, detailed treatment and manufacturing process information was not available in NPDES permit files; therefore, the assessment of feasibility was based primarily upon the reviewing engineer's best professional judgment using general knowledge of industrial and municipal operations.

If EPA determined that waste minimization/pollution prevention alone was not feasible to reduce pollutant levels to those needed to comply with the projected CTR-based WQBELs, EPA estimated costs for a combination of waste minimization/pollution prevention, simple treatment, and/or process optimization. If these relatively low-cost controls could not achieve the CTR-based WQBELs, EPA estimated costs for more expensive controls (e.g., end-of-pipe treatment).

Development of end-of-pipe treatment cost estimates began with a review of the existing treatment systems at each facility. EPA considered its Office of Research and Development, Risk Reduction Engineering Laboratory's "RREL Treatability Database" (Version 4.0) in determining the need for additional or supplemental treatment. The pollutant removal capabilities of the existing treatment systems and/or any proposed additional or supplemental systems were evaluated based on the following criteria: (1) the effluent levels that were being achieved currently at the facility; and (2) the levels that are documented in the EPA "RREL Treatability Database." If this analysis showed that additional treatment was needed, EPA estimated capital and operating and maintenance (O&M) costs for unit processes that would achieve compliance with the projected CTR-based effluent limits using the same documentation.

Finally, for a low cost scenario (described below), EPA considered the relationship between the cost of adding the treatment and other types of remedies or controls following the calculation of end-of-pipe treatment costs. Specifically, if the estimated annualized cost for removing a pollutant exceeded a prescribed value [expressed as dollars per pound equivalent ($/lb-eq)] for a facility, EPA assumed that a discharger would use alternative regulatory approaches to comply with CTR-based effluent limits as long as the cost of these options was less than the anticipated pollution control costs. EPA referred to the prescribed value as the "cost trigger." In these situations (this was the case for two pollutants at one sample facility), EPA estimated the cost for special studies or monitoring that may be required to pursue the regulatory alternative instead of treatment costs and did not anticipate pollutant loading reductions at the facility.

The types of alternative regulatory approaches assumed available for dischargers in California include phased total maximum daily loads (TMDLs), water quality standard variances, site-specific criteria, change in designated use, translators for metals, and alternative mixing zones. Whether these options are available to dischargers or not depends on how the State chooses to implement the CTR. EPA accounted for the potential use of such alternatives by employing the cost trigger as part of a low cost scenario. However, to ensure that costs are not underestimated if these alternatives are not available, EPA developed a high cost scenario that does not employ the cost trigger. If the State does not make alternative regulatory approaches available to

dischargers, EPA believes that the potential cost impact will lie between the low and high scenario estimates.

Cost Scenarios

Since states are not required to use the methods recommended in the TSD, implementation procedures can vary, and may result in more or less stringent WQBELs. Because of the uncertainty regarding the State of California approach to implementation at this time, EPA developed a range of costs to represent the potential range of impact of the CTR based on certain implementation assumptions. The upper and lower bounds of these cost assumptions are referred to as the "high" and "low" cost scenarios, respectively. The principal differences between these scenarios are described below.

EPA established the baseline for analysis of the pollutant controls necessary to meet projected CTR-based limits using the treatment systems in place at the sample facilities as described in the facility's NPDES permit. This baseline was used even in cases in which the existing maximum effluent concentration exceeded the existing permit limit at a facility. In theory, this assumption could result in overstating the pollutant controls necessary to meet the CTR-based limits if additional treatment were required to come into compliance with existing limits. However, in practice, only small differences were observed between current limits and maximum effluent concentrations in these cases.

Low Scenario

For a low scenario, EPA calculated baseline loadings and CTR-based WQBELs and loadings only for those pollutants that had been detected in the effluent at sample facilities for the most recent 3 years of data since 1993 and that failed the reasonable potential test.

EPA developed a low cost scenario to reflect a lower baseline loadings estimate and a more flexible State implementation approach than the high scenario. The assumptions used for the low scenario result in an estimate based on a smaller number of affected pollutants and a lower amount of incremental pollutant removals necessary to comply with CTR-based effluent limits (as compared with the high scenario). The assumptions used for the low scenario are:

- In the absence of any monitoring data, EPA assumed that no costs would be incurred, even if a permit limit exists that is less stringent than the CTR-based limit. That is, EPA assumed that if a facility is not monitoring for a pollutant, it is not likely to be present in the effluent.

- As described more fully above, if the estimated annualized cost for removal of a pollutant exceeded a cost trigger of $200 per toxic pound-equivalent, EPA assumed that dischargers would use alternative regulatory approaches (as long as the cost of such options was less than the cost of pollution control). In these situations, EPA estimated the cost for alternative approaches and did not

anticipate any pollutant loading reductions.

High Scenario

For a high scenario, EPA established baseline loadings and calculated projected CTR-based WQBELs and loadings for all pollutants for which limits had been established in existing NPDES permits (whether or not data indicated that these pollutants were present in the discharge). EPA also established baseline loadings and calculated projected CTR-based WQBELs and loadings for all other CTR regulated pollutants that were detected in the effluent and failed the reasonable potential test.

EPA developed the high cost scenario to reflect a higher baseline loadings estimate and a less-flexible state implementation approach than the low scenario. The assumptions used for the high scenario result in an estimate with a greater number of affected pollutants and a greater amount of incremental pollutant removals necessary to comply with CTR-based effluent limits compared to the low scenario. In addition, all necessary pollutant reductions were assumed to be achieved through either treatment or a waste control program (e.g., waste minimization, pollution prevention). That is, EPA did not employ the cost trigger for the high scenario.

Extrapolation of Costs

After estimating potential capital and O&M costs for each facility under the two scenarios, EPA estimated total annual costs by annualizing capital costs 7% over ten years and then adding in O&M costs. Note that this assumed ten year capital life likely overstates costs because capital equipment may last considerably longer than ten years.

EPA then extrapolated the annual costs based on the percent of the universe of regulated facilities represented by each group of sample facilities. EPA extrapolated major POTWs using three flow strata. EPA extrapolated major industrial facilities using industrial classification groupings (e.g., lumber and paper, electric utilities). Finally, EPA extrapolated minor POTWs and minor industrial facilities as separate groupings (not further distinguished by flow or industrial category).

4.1.3 Method for Estimating Pollutant Loading Reductions

EPA calculated pollutant loading reductions for each facility by calculating the difference between the baseline effluent concentration and the projected CTR-based effluent limitation.

For the low scenario the following apply:

- No reduction was assumed if the difference between the baseline value and the CTR limitation was negative.

- If the existing effluent concentration was above the MDL, but the CTR-based

limit was below the MDL, the CTR-based limit, or one-half of the MDL (whichever produces a smaller load reduction) was used for the CTR-based effluent limitation.

- If the maximum reported effluent concentration exceeded the existing permit limit, high scenario assumptions were employed.

For the high scenario the following apply:

- If all effluent data for a pollutant were reported below detection levels, the method detection level (MDL) was used as the maximum observed concentration. If the maximum observed concentration was below the CTR-based limitation, no loading reductions were considered.

- If the difference between the baseline value (existing permit limit or effluent concentration) and the CTR limitation was negative, zero reduction was assumed.

- If both the CTR-based WQBEL and the existing permit limit were below the analytical MDL, one-half of the difference between the existing permit limit and the CTR-based limit was used to estimate the pollutant load reduction.

- If the existing permit limit (or effluent concentration in the absence of a permit limit) was above the MDL, but the CTR limit was below the MDL, the CTR-based limit, or one-half of the MDL (whichever produced a smaller load reduction) was used for the CTR-based limit for calculating pollutant load reductions.

EPA estimated annual baseline pollutant loadings by multiplying the baseline value (expressed in micrograms per liter) by the average daily flow rate (in million gallons per day), or, for publicly owned treatment works (POTWs), by the design flow, a conversion factor (0.00834), and 365 days per year. Then, to determine the reduction in loadings, EPA converted the difference between the most stringent existing permit limitation (or the maximum reported effluent concentration) and the most stringent CTR-based effluent limitation (in concentration units) to pounds per year by multiplying the difference by the facility's average daily flow rate (design flow rate for municipal dischargers), a conversion factor, and 365 days per year. EPA calculated annual pollutant loading reductions for each of the pollutants analyzed at each sample facility for which costs were estimated. The average load reduction then was calculated across sample facilities within each discharge category and extrapolated to the universe of facilities by multiplying the average load reduction by the total number of facilities in the category (EPA extrapolated facility specific costs similarly).

EPA converted baseline pollutant loadings and loading reductions from actual pounds (lb) to toxic-weighted pounds-equivalent (lb-eq) using EPA chronic freshwater aquatic life criteria and toxicity values, standardized to the former chronic aquatic life criterion for copper (copper

formerly had a water quality criterion value of 5.6 ug/L). EPA human health criteria also were used in cases in which a human health criterion had been established for the consumption of fish. National water quality criteria have changed over the years, resulting in corresponding changes in toxic weights. Also, because the CTR applies to both freshwater and saltwater, two different sets of toxic weights would be required. To prevent the overstating of pollutant reductions due to the higher toxic weighting factors that would have been calculated using CTR criteria, EPA used previously calculated toxic weights shown in **Exhibit 4-1**. This approach allows for the direct comparison of the loadings reductions predicted from implementation of the CTR criteria and those loading reductions predicted in previous EPA rulemakings.

4.1.4 Method for Estimating Costs to Indirect Dischargers

Because of the uncertainty of the exact controls that POTWs would use as a result of more stringent CTR-based WQBELs, EPA assumed that many POTWs will select the option of controlling discharges to their collection system as a cost-effective means to comply with CTR-based permit limits. If POTWs were to select this method of control, the dischargers to the POTWs would be affected. Therefore, EPA estimated the potential costs to dischargers to POTWs (i.e., indirect dischargers).

EPA's estimate was based in part on information from the San Jose-Santa Clara and Sunnyvale POTWs, which discharge to South San Francisco Bay, and which already have conducted substantial work with indirect dischargers to meet current permit limits. Specifically, these POTWs were required to perform mass audit studies for copper and nickel. These studies estimated the total costs of implementing various combinations of copper and nickel reduction projects (see City of San Jose, 1994; EOA, 1994). Based on these studies, EPA estimated an average cost per significant industrial users (SIU) of $64,395, or $15,705 per year annualized at 7% over a period of 5 years. EPA then multiplied this cost by the percentage of SIUs assumed to be affected under the low and high scenarios (see Section 4.2).

Exhibit 4-1. Toxic Weights of Pollutants Analyzed

Pollutant	Toxic Weight
Antimony *	1
Arsenic	4
Cadmium	5.2
Chromium VI	35.5
Copper	0.47
Lead	1.8
Mercury	500
Nickel	0.036
Selenium	1.1
Silver	47
Thallium*	1
Zinc	0.051
1,2-Dichlorobenzene	0.011
1,2 Dichloroethane*	1
1,2 Dichloropropane*	1
1,2-Trans-Dichloroethylene*	1
1,3-Dichlorobenzene*	1
1,3-Dichloropropylene*	1
1,4-Dichlorobenzene*	1
2,4-Dinitrophenol*	1
2,4,6-Trichlorophenol	0.35
4,4'-DDD	760
4,4'-DDT	6,500
Aldrin	50
alpha-BHC	100
alpha-Endosulfan	100
Benzene	0.018
Benzo (a) Anthracene*	1
Benzo (a) Fluoranthene*	1
Benzo (k) Fluoranthene*	1
beta-BHC	100
beta-Endosulfan*	1
Bromoform*	1
Butylbenzyl-phthalate*	1
Carbon Tetrachloride*	1
Chlordane	2,300
Chlorobenzene*	1
Chlorodibromomethane*	1
Chloroform	0.0021
Dichlorobromomethane*	1
Dieldrin	57,000

Source: EPA/OST 1988 Cost-Effectiveness Criteria and Weights.
*Value was not provided in source document. A toxic weight of 1 was assumed.

4.2 SUMMARY OF CHANGES TO DRAFT ANALYSIS

To address comments raised on the draft economic analysis (SAIC, 1997), EPA gathered additional data and information to refine the analysis of potential costs and pollutant loading reductions attributable to the CTR. A large part of the effort was directed toward obtaining the most recent NPDES permits and effluent monitoring data for the sample facilities. Efforts also were directed toward increasing the sample size of minor POTWs and minor industrial facilities. EPA randomly selected four new minor POTWs and five new minor industrial facilities to add to the sample. The number of sample facilities selected in each RWQCB was roughly proportional to the universe of facilities in the region. The new sample facilities are listed in **Exhibit 4-2.**

Exhibit 4-2. New Minor Sample Facilities

POTWs	Industrial Facilities
Forestville County Sanitation District	Airline Signal Aerospace, Torrance Facility
City of Calistoga	Los Angeles County Department of Parks and Recreation, Lennox County Park
City of Biggs	Sierra Pacific Feather River Division, Mill Creek
Donner Summit Public Utility District Wastewater Treatment Plant	Great Lakes Chemical Corporation
	California Department of Fish and Game, Iron Gate Salmon Hatchery

An original minor industrial facility (Arco Station 434) was deleted from the sample, however, because it ceased operation and no effluent monitoring data were available for the analysis. As a result of the addition of the facilities listed in Exhibit 4-2, the final sample size of minor POTWs was five, and the final sample size of minor industrial facilities was six.

For the major facility sample, EPA randomly selected the San Diego Gas and Electric Facility at South Bay to replace the San Diego Gas and Electric Silvergate Facility. The Silvergate facility is no longer in operation and no effluent monitoring data were available for the analysis. Additionally, EPA removed the Mining Remedial Recovery Company (known as Alta Gold in the original sample) from the sample. The facility is a closed mine with acid mine drainage coming out of many adits disseminated around the property.

EPA also revised its methodology for calculating a PEQ to address mathematical problems encountered due to limited data sets for some facilities. In the original cost estimate, all non-detect values were assumed to be "zero" for the purposes of calculating the coefficient of variation (CV). This approach resulted in unrealistically high CV values in some instances. A high CV value results in the selection of a high PEQ multiplier and, consequently, a high PEQ value. Based on a review of the available data, EPA determined that using one-half of the method detection level, instead of "zero" for non-detects, resulted in a more accurate CV. EPA, therefore, revised the PEQ methodology to use the following:

- For calculation of the CV, half the detection level of the sample was used for effluent data reported as below the detection level.

- If greater than 20 data points were available for a pollutant, the 99th percentile value was calculated from the data set to represent the PEQ.

Changes to the cost estimation methodology included revisions to the treatment process optimization costs and waste minimization/pollution prevention cost estimates. EPA developed process optimization cost estimates to replace the previous average per facility cost of $100,000. Process modification costs are expressed as a range of values and are based on the flow and type of treatment system [e.g., $2,000 to $60,000 for optimization of biological treatment at a less than one million gallons per day (MGD) facility].

For waste minimization/pollution prevention, EPA increased the cost used in the high scenario for POTWs with a design flow of greater than 5 MGD (from $400,000 to $2,000,000). The revised cost is the highest pollution prevention cost estimate derived by EPA in assessing of compliance costs resulting from implementation of the proposed Great Lakes Water Quality Guidance (SAIC, 1993). The revised cost estimates are shown in **Exhibit 4-3.**

Exhibit 4-3. Revised Waste Minimization/Pollution Prevention Cost Estimates

Category	Low Scenario	High Scenario
POTWs with flow greater than 5 MGD	$400,000	$2,000,000
POTWs with flow less than 5 MGD	$400,000	$400,000
Minor POTWs	$50,000	$50,000
Minor Industrial Dischargers	$50,000	$50,000

Previously, when costs exceeded $500 per pounds-equivalent (lb-eq) removed for an industrial category in the high scenario, EPA assumed that regulatory alternatives to treatment would be used. For this revised analysis, the high scenario reflects the assumption that no regulatory alternatives will be available to dischargers. EPA still assumes that regulatory alternatives will be pursued under the low scenario when the cost for an individual facility exceeds $200 per lb-eq removed.

EPA also revised its assumptions regarding the number of indirect dischargers that may be affected as a result of more stringent CTR-based WQBELs at POTWs. EPA estimated that there are 2,144 SIUs that discharge to POTWs located on California inland surface waters and enclosed bays and estuaries. Previously, EPA assumed that 10% to 30% of SIUs would be impacted. Based on comments received indicating that the number of facilities affected was understated, EPA increased this range to 30% to 70%. However, EPA believes that this revised assumption is unrealistic and that the original 10% to 30% more closely reflects the likely impact. Nonetheless, EPA increased the range of affected facilities to ensure that the cost

estimates for the final rule account are conservative (i.e., err on the side of higher costs).

EPA applied the 70% estimate under the low cost scenario which reflects less use of end-of-pipe treatment and more use of source controls. EPA applied the 30% estimate under the high scenario which reflects more frequent use of end-of-pipe treatment. EPA estimated costs to indirect dischargers based on the average costs from the mass audit studies conducted by San Jose and Sunnyvale, described above (see City of San Jose, 1994; EOA, 1994). Based on these studies, EPA estimated an average cost per indirect discharger of $64,395, or $15,705 per year annualized at 7% over a period of 5 years.

4.3 RESULTS

EPA estimated the potential annual cost of implementing the CTR ranges from approximately $33.5 million to $61.0 million. As shown in **Exhibit 4-4**, indirect dischargers bear most of these costs in the low scenario. Under the high scenario, direct dischargers were expected to incur most of the potential costs. However, high costs are unlikely because EPA used conservative (i.e., tending to err on the high side) assumptions in calculating CTR-based permit limits and in establishing baseline loadings. For example, the baseline loadings for the high scenario were generally based on current effluent limits rather than actual pollutant discharge data. Most facilities discharge pollutants in concentrations below current effluent limits.

Exhibit 4-4. Summary of Potential Annualized Costs (Millions of 1998 First Quarter Dollars)

Discharger Category	Low Scenario	High Scenario
Direct Dischargers	$9.9	$50.9
Indirect Dischargers	$23.6	$10.1
Total	**$33.5**	**$61.0**

4.3.1 Low Scenario

Under the low scenario, major permitted dischargers account for the largest share of the costs (91%) compared to 9% for minor dischargers. Of the major dischargers, POTWs are expected to incur the largest share (87%) of the projected costs (see **Exhibit 4-5**). However, distributed among 128 major POTWs in the state, the average cost per plant is approximately $61,000 per year. Chemical and petroleum industries incur the highest cost of the industrial categories (5.6% of the total annual costs, with an annual average of $25,200 per plant). For minor dischargers, only POTWs are expected to incur costs (9%). The average cost per plant for minor POTWs is approximately $5,000, an amount lower than any major facility category.

Nearly 38% of the total compliance costs are for pursuing alternative regulatory approaches. EPA assumed that alternative regulatory approaches would be pursued if the total cost of treatment exceeded a trigger of $200 per pound of pollutant reduced. Annualized costs for developing and implementing waste minimization plans accounted for 57% of the remaining costs. Five pollutants (copper, mercury, tetrachloroethylene, carbon tetrachloride, and methylene chloride) account for 53% of low scenario annual costs. Fifty-five percent of annual costs were for the control of toxic organics; costs to control metals and mercury accounted for 45% of all annual costs.

Exhibit 4-5. Summary of Annual Costs by Discharger Category: Low Scenario (1998 First Quarter Dollars)

Discharger Category	Number of Plants	Total Costs	Category Cost as a Percent of Total Cost	Average Cost per Plant
Major Dischargers				
POTWs	128	$7,841,583	87.0%	$61,262
Chemicals/Petroleum Products	20	$504,016	5.6%	$25,201
Electric Utilities	13	$370,182	4.1%	$28,476
Metals and Transportation Equipment	7	$52,822	0.6%	$7,546
Miscellaneous	12	$240,171	2.7%	$20,014
Lumber and Paper	4	$0	0.0%	$0
Subtotal	**184**	**$9,008,774**	**100%**	**$48,961**
Minor Dischargers				
POTWs	185	$921,894	100%	$4,983
Industrials	872	$0	0.0%	$0
Subtotal	**1057**	**$921,894**	**100%**	**$872**
All Dischargers				
Total	**1241**	**$9,930,668**	**NA**	**$8,002**

4.3.2 High Scenario

Under the high scenario, major permitted dischargers account for 94% of the annual costs compared to 6% for minor sample facilities. For major dischargers, POTWs were expected to incur approximately 87% of the total projected annualized cost (see **Exhibit 4-6**). However, distributed among the 128 major POTWs in the state, the average cost per plant is approximately $325,000 per year. Chemical and petroleum industries incur the highest cost among the industrial categories (9% of the total estimated annual cost, and averaging just over $221,000 per plant annually). For minor facilities, the average cost per plant for POTWs is $7,800, compared to $1,600 per plant for industrial facilities.

Over 91% of the annual costs are for waste minimization and treatment process optimization costs. Waste minimization represents nearly 84% of the total annual costs. EPA assumed that waste minimization and process optimization would be pursued because the increment of pollutant removal is relatively small (i.e., less than 25% of current effluent levels) and many of the sample facilities already possess treatment processes that could be enhanced to achieve CTR-based effluent limits. Capital and operating and maintenance (O&M) costs make up less than 9% of total annual costs. Four pollutants (tetrachloroethylene, silver, copper, and mercury) resulted in 41% of the estimated high scenario annual costs. Costs to control metals and mercury accounted for more than 50% of annual costs; costs to control toxic organic pollutants accounted for slightly less than 50%.

Exhibit 4-6. Summary of Annual Costs by Discharger Category: High Scenario (1998 First Quarter Dollars)

Discharger Category	Number of Plants	Total Costs	Category Cost as a Percent of Total Cost	Average Cost per Plant
Major Dischargers				
POTWs	128	$41,599,147	86.5%	$324,993
Chemicals/Petroleum Products	20	$4,425,287	9.2%	$221,264
Electric Utilities	13	$370,182	0.8%	$28,476
Metals and Transportation Equipment	7	$351,815	0.7%	$50,259
Miscellaneous	12	$1,321,720	2.7%	$110,143
Lumber and Paper	4	$0	0.0%	$0
Subtotal	**184**	**$48,068,151**	**100%**	**$261,240**
Minor Dischargers				
POTWs	185	$1,448,691	51.1%	$7,831
Industrials	872	$1,386,377	48.9%	$1,590
Subtotal	**1057**	**$2,835,068**	**100%**	**$2,682**
All Dischargers				
Total	**1241**	**$50,903,219**	**NA**	**$41,018**

Note: Totals may not add up due to rounding.

4.4 POLLUTANT LOADING REDUCTIONS AND COST-EFFECTIVENESS

Exhibits 4-7 and **4-8** present the annual unweighted and toxic-weighted baseline pollutant loadings and loadings reductions, respectively. As shown in Exhibit 4-8, under the low scenario, where the baseline represents existing effluent concentrations, the expected reduction in pollutant loadings resulting from implementation of the criteria contained in the CTR is approximately 1.1 million toxic lb-eq per year, or 50% of the baseline load of 2.2 million toxic lb-eq per year. Under the high scenario, the expected reduction in pollutant loadings resulting from the implementation of the CTR-based WQBELs is approximately 2.7 million toxic lb-eq per year, or 15% of the baseline load of 18.5 million toxic lb-eq per year.

Exhibit 4-7. Baseline Pollutant Loadings and Reductions (Not Toxicity-Weighted, Lbs/yr)

Pollutant	Low			High		
	Existing	Reduction	% Reduction	Existing	Reduction	% Reduction
Antimony (Sb)	0	0		0	0	
Arsenic (As)	148	0	0.0%	319,804	0	0.0%
Cadmium (Cd)	82	0	0.0%	45,764	225	0.5%
Chromium VI (Cr-VI)	1,759	1,327	75.4%	102,848	14,167	13.8%
Copper (Cu)	386,839	44,675	11.5%	451,966	82,241	18.2%
Lead (Pb)	311,631	23,268	7.5%	454,881	36,765	8.1%
Mercury (Hg)	2,116	1,583	74.8%	2,477	1,627	65.7%
Nickel (Ni)	294,259	0	0.0%	1,509,107	277,120	18.4%
Selenium (Se)	152	0	0.2%	57,256	54	0.1%
Silver (Ag)	3,679	2,252	61.2%	103,751	16,479	15.9%
Thallium (Tl)	0	0		0	0	
Zinc (Zn)	468,416	0	0.0%	1,468,700	71,476	4.9%
1,2 Dichlorobenzene	0	0		14,319,172	421,101	2.9%
1,2 Dichloroethane	0	0		2	0	0.0%
1,2 Dichloropropane	0	0		2	0	0.0%
1,2-Trans-Dichloroethylene	0	0		0	0	
1,3 Dichlorobenzene	0	0		4,425,512	0	0.0%
1,3-Dichloropropylene	0	0		0	0	
1,4 Dichlorobenzene	0	0		163,541	0	0.0%
2,4-Dinitrophenol	0	0		0	0	
2,4,6 Trichlorophenol	879	756	86.0%	1,876	756	40.3%
4,4'-DDD	0	0		0	0	
4,4'-DDT	1	0	0.0%	1	0	0.0%
Aldrin	0	0	0.0%	0	0	0.0%
alpha-BHC	9	0	0.0%	27	0	0.0%
alpha-Endosulfan	0	0		5	0	0.0%
Benzene	0	0		41,957	0	0.0%
Benzo (a) Anthracene	1	0	0.0%	1	0	0.0%
Benzo (a) Fluoranthene	1	0	0.0%	1	0	0.0%
Benzo (k) Fluoranthene	17	0	0.0%	17	0	0.0%
beta-BHC	34	0	0.0%	96	0	0.0%
beta-Endosulfan	0	0		4	0	0.0%
Bromoform	0	0		924	0	0.0%
Butylbenzyl-phthalate	0	0		0	0	
Carbon Tetrachloride	5,586	3,502	62.7%	5,598	3,508	62.7%
Chlordane	0	0		0	0	0.0%
Chlorobenzene	0	0		0	0	
Chlorodibromomethane	12,532	10,296	82.2%	12,533	10,296	82.2%
Chloroform	250,555	223,085	89.0%	1,336,084	522,958	39.1%
Dichlorobromomethane	57,456	54,669	95.1%	57,786	54,679	94.6%
Dieldrin	0	0	0.0%	0	0	0.0%
Di-n-Butyl Phthalate	0	0		0	0	
Endosulfan Sulfate	0	0		0	0	
Endrin	0	0		6	0	0.0%
Endrin Aldehyde	0	0		0	0	
Fluoranthene	0	0		186,752	0	0.0%
Fluorene	0	0		0	0	
gamma-BHC	130	41	31.2%	213	41	19.1%
Heptachlor	0	0	0.0%	0	0	0.0%
Heptachlor epoxide	0	0	0.0%	0	0	0.0%
Hexachlorobenzene	0	0		291	280	96.1%
Methylene chloride	16,885	5,253	31.1%	1,453,701	5,253	0.4%
PCBs	0	0		0	0	51.9%
Pentachlorophenol	879	773	88.0%	11,583	5,510	47.6%
Phenol	0	0		767,755	0	0.0%
TCDD	0	0		0	0	0.0%
Tetrachloroethylene	6,832	4,487	65.7%	6,930	4,492	64.8%
Toluene	0	0		126,606,651	42,110,050	33.3%
Toxaphene	0	0		0	0	2.0%
Trichloroethylene	0	0		6	0	0.0%
Total Reductions	1,820,879	375,967	20.6%	153,915,584	43,639,078	28.4%

Exhibit 4-8. Toxicity-Weighted Baseline Pollutant Loadings and Reductions (Lbs-eq/yr)

Pollutant	Low			High		
	Existing	Reductions	% Reductions	Existing	Reductions	% Reduction
Antimony (Sb)	0	0		0	0	
Arsenic (As)	592	0	0.0%	1,279,218	0	0.0%
Cadmium (Cd)	424	0	0.0%	237,971	1,170	0.5%
Chromium VI (Cr-VI)	62,454	47,113	75.4%	3,651,115	502,936	13.8%
Copper (Cu)	181,814	20,997	11.5%	212,424	38,653	18.2%
Lead (Pb)	560,936	41,882	7.5%	818,785	66,178	8.1%
Mercury (Hg)	1,057,793	791,601	74.8%	1,238,464	813,467	65.7%
Nickel (Ni)	10,593	0	0.0%	54,328	9,976	18.4%
Selenium (Se)	167	0	0.2%	62,982	59	0.1%
Silver (Ag)	172,906	105,829	61.2%	4,876,297	774,534	15.9%
Thallium (Tl)	0	0		0	0	
Zinc (Zn)	23,889	0	0.0%	74,904	3,645	4.9%
1,2 Dichlorobenzene	0	0		157,511	4,632	2.9%
1,2 Dichloroethane	0	0		2	0	
1,2 Dichloropropane	0	0		2	0	
1,2-Trans-Dichloroethylene	0	0		0	0	
1,3 Dichlorobenzene	0	0		4,425,512	0	0.0%
1,3-Dichloropropylene	0	0		0	0	
1,4 Dichlorobenzene	0	0		163,541	0	0.0%
2,4-Dinitrophenol	0	0		0	0	
2,4,6 Trichlorophenol	307	264	86.0%	656	264	40.3%
4,4'-DDD	0	0		0	0	
4,4'-DDT	4,670	0	0.0%	9,720	0	0.0%
Aldrin	8	0	0.0%	17	0	0.0%
alpha-BHC	950	0	0.0%	2,686	0	0.0%
alpha-Endosulfan	0	0		500	0	0.0%
Benzene	0	0		755	0	0.0%
Benzo (a) Anthracene	1	0	0.0%	1	0	0.0%
Benzo (a) Fluoranthene	1	0	0.0%	1	0	0.0%
Benzo (k) Fluoranthene	17	0	0.0%	17	0	0.0%
beta-BHC	3,409	0	0.0%	9,553	0	0.0%
beta-Endosulfan	0	0		4	0	0.0%
Bromoform	0	0		924	0	0.0%
Butylbenzyl-phthalate	0	0		0	0	
Carbon Tetrachloride	5,586	3,502	62.7%	5,598	3,508	62.7%
Chlordane	0	0		465	0	0.0%
Chlorobenzene	0	0		0	0	
Chlorodibromomethane	12,532	10,296	82.2%	12,533	10,296	82.2%
Chloroform	526	468	89.0%	2,806	1,098	39.1%
Dichlorobromomethane	57,456	54,669	95.1%	57,786	54,679	94.6%
Dieldrin	9,717	0	0.0%	20,028	0	0.0%
Di-n-Butyl Phthalate	0	0		0	0	
Endosulfan Sulfate	0	0		0	0	
Endrin	0	0		566	0	0.0%
Endrin Aldehyde	0	0		0	0	
Fluoranthene	0	0		171,812	0	0.0%
Fluorene	0	0		0	0	
gamma-BHC	9,128	2,849	31.2%	14,925	2,849	19.1%
Heptachlor	799	0	0.0%	1,701	0	0.0%
Heptachlor epoxide	0	0	0.0%	0	0	0.0%
Hexachlorobenzene	0	0		209,741	201,623	96.1%
Methylene chloride	7	2	31.1%	610	2	0.4%
PCBs	0	0		3,001	1,557	51.9%
Pentachlorophenol	439	387	88.0%	5,792	2,755	47.6%
Phenol	0	0		21,497	0	0.0%
TCDD	0	0		16,065	0	0.0%
Tetrachloroethylene	506	332	65.7%	513	332	64.8%
Toluene	0	0		708,997	235,816	33.3%
Toxaphene	0	0		8,118	163	2.0%
Trichloroethylene	0	0		6	0	0.0%
Total Reductions	**2,177,628**	**1,080,192**	**49.6%**	**18,540,452**	**2,730,194**	**14.7%**

Exhibit 4-9 shows the 10 largest percentage toxic-weighted reductions by pollutant anticipated under the low and high scenarios. Under the low scenario, mercury is anticipated to be reduced by more than 73%; silver accounts for nearly another 10% reduction. Overall, organic removals account for just under 7% of the total reductions. The top two organics, dichlorobromomethane and chlorodibromomethane, are reduced by 5.1% and 1.0%, respectively. The small number of pollutants for which pollutant reductions were observed was partially because, under the low scenario, EPA assumed that alternative regulatory approaches would be sought for a number of pollutants and did not take credit for potential pollutant loading reductions.

Under the high scenario, just over 80% of the total projected toxic-weighted annual reductions will come from reducing metals, including mercury, while nearly 19% of expected reductions are for organic pollutants. Of the metals that will be reduced, mercury accounts for just under 30% of the total annual reductions and silver accounts for another 28%. Of the organics, toluene and hexachlorobenzene account for 8.6 and 7.4%, respectively, of the total annual reductions, while two other organic pollutants are reduced at relatively small percentages.

Exhibit 4-9. Ranking of Ten Highest Toxic-Weighted Pollutant Reductions

Low Scenario		High Scenario	
Pollutant	**Reduction as a Percent of Total**	**Pollutant**	**Reduction as a Percent of Total**
Mercury	73.3%	Mercury	29.8%
Silver	9.8%	Silver	28.4%
Dichlorobromomethane	5.1%	Chromium VI	18.4%
Chromium VI	4.4%	Toluene	8.6%
Lead	3.9%	Hexachlorobenzene	7.4%
Copper	1.9%	Lead	2.4%
Chlorodibromomethane	1.0%	Dichlorobromomethane	2.0%
Carbon tetrachloride	0.3%	Copper	1.4%
gamma-BHC	0.3%	Chlorodibromomethane	0.4%
Chloroform	<0.1%	Nickel	0.4%
Total	**100%**	**Total**	**100%**

Note: Totals are rounded.

The estimated cost-effectiveness of the rule is shown in **Exhibit 4-10** and ranges from $22 per toxic lb-eq to $31 per toxic lb-eq. In the low scenario, the highest cost-effectiveness value was observed for the electric utilities category ($43 per toxic lb-eq), while the lowest was for the chemicals and petroleum products category at $6 per toxic lb-eq. In the high scenario, the highest cost-effectiveness value was also for the metals/transportation equipment category at $223 per toxic lb-eq, while the lowest was for POTWs at $21 per toxic lb-eq. For comparison, **Exhibit 4-11** presents cost-effectiveness estimates from previous EPA rulemakings.

Exhibit 4-10. Annual Baseline Loads, Load Reductions, and Cost-Effectiveness

Category	Low Scenario			High Scenario		
	Annual Costs[1]	Loading Reductions[2]	Cost-Effectiveness[3]	Annual Costs[1]	Loading Reductions[2]	Cost-Effectiveness[3]
POTWs - Indirect Dischargers	$7.8 $23.6	0.91	$35	$41.6 $10.1	2.47	$21
Chemicals/Petroleum Products	$0.5	0.08	$6	$4.4	0.12	$36
Electric Utilities	$0.4	0.01	$43	$0.4	0.01	$43
Metals/Transport Equipment	$0.05	0.001	$38	$0.4	0.002	$223
Miscellaneous	$0.2	0.02	$10	$1.3	0.03	$38
Lumber/Paper	$0	0	NC	$0	0	NC
All Dischargers[4]	**$33.5**	**1.08**	**$31**	**$61.0**	**2.73**	**$22**

Note: Detail may not add to total due to rounding.
[1] Millions of 1998 first-quarter dollars.
[2] Millions of toxic-weighted pounds (lb-eq)
[3] $/lb-eq
[4] Including major and minor dischargers.
NC: Not calculated.

4.5 SOURCES OF UNCERTAINTY IN THE ANALYSIS

The estimates of potential compliance costs are based on assumptions to facilitate analysis and to overcome data limitations, where necessary. EPA generally designed these assumptions to be "conservative," that is, to err on the side of estimating more stringent and costly controls than would actually be required. Some of these assumptions also may tend to overstate pollutant loading reductions. **Exhibit 4-12** provides a summary of EPA's assumptions and the potential impact on the analysis of costs and benefits.

Exhibit 4-11. Estimated Incremental Cost-Effectiveness for Direct Dischargers by Industry[1] (1998 First Quarter Dollars)

Industry	Incremental Cost-Effectiveness for Selected Technology Options ($/lb-eq removed)[2]
Aluminum Forming	174.71
Battery Manufacturing	2.89
Coil Coating – Can making	14.44
Coal Mining	None
Coil Coating	70.75
Copper Forming	38.98
Electronics I	583.32
Electronics II	Not Available
Foundries	121.28
Inorganic Chemicals I	<1.45
Inorganic Chemicals II	8.67
Iron and Steel	2.89
Leather Tanning	None
Metal Finishing	17.32
Nonferrous Metals Forming	99.62
Nonferrous Metals Manufacturing I	5.77
Nonferrous Metals Manufacturing II	8.67
OCPSF	7.22[3]
Pharmaceuticals	1.45
Plastics Molding and Forming	None
Porcelain Enameling	8.67
Petroleum Refining	None
Pulp and Paper (PCB control for De-ink subcategory only)	25.99
Textile Mills	None

[1] Toxic and nonconventional pollutants only.
[2] Updated from 1981 dollars. Reflects incremental cost-effectiveness to proceed from current levels to levels represented by best available technology economically achievable.
[3] Reflects costs and removals of both air and water pollutants.
Source: EPA, 1992.

Exhibit 4-12. Biases and Uncertainties in the Analysis

Assumption	Potential Impact on Costs	Potential Impact on Benefits	Comments
Methods used to determine reasonable potential and calculate CTR-based WQBELs based on the EPA *Technical Support Document for Water Quality-based Toxics Control* (or TSD)	?	?	The TSD provides methods that account for sample size and effluent variability. If state implementation procedures are not comparable, TSD methods may over- or understate costs.
Use of 1:1 translator to convert dissolved-form criteria to total recoverable criteria for purposes of determining reasonable potential	+	+	Tends to result in more stringent effluent limits. Tends to overestimate the reasonable potential to exceed CTR-based limits.
Plant design flow used in calculating CTR-based effluent limits	+	+	Tends to overestimate the costs and pollutant loading reduction required to achieve CTR-based limits.
Zero dilution assumed in the absence of data or information related to critical low flow for the receiving water	+	+	Tends to make WQBELs more stringent. Tends to overestimate the costs and pollutant loading reductions required to achieve CTR-based limits.
Highest reported ambient receiving water concentration used to represent the background concentration when calculating CTR-based WQBELs	+	+	Using the highest reported value potentially denies the discharger use of a portion of the assimilative capacity of the receiving water. Tends to result in a greater need for treatment, and thus, potentially higher costs and pollutant loading reductions required to achieve CTR-based limits.
In the absence of ambient receiving water data, zero used as the background concentration	-	-	Assuming zero in the absence of background data potentially allows the discharger a larger portion of the assimilative capacity of the receiving water. Tends to underestimate costs and pollutant loading reductions required to achieve CTR-based limits.
Maximum pollutant effluent concentrations observed during the monitoring period used for estimating costs if CTR-based WQBELs were exceeded (low-end scenario)	+	+	Overstates the need for pollutant reductions to meet CTR-based WQBELs; tends to overestimate costs and pollutant loading reductions required to achieve CTR-based limits

Exhibit 4-12. Biases and Uncertainties in the Analysis (Continued)

Assumption	Potential Impact on Costs	Potential Impact on Benefits	Comments
Existing permit limit, or maximum pollutant effluent concentration in the absence of a permit limit, used for estimating costs if CTR-based WQBELs were exceeded (high scenario)	+	+	If facility is in compliance with effluent limits (i.e., discharging at levels below the permit limit), overstates the need for pollutant reductions to meet CTR-based WQBELs. Tends to overestimate costs and pollutant loading reductions required to achieve CTR-based limits.
Capital costs amortized over 10 years	+	0	The useful life of most equipment currently is more than 10 years. Tends to overestimate the annual costs to a facility.

\+ potentially upward bias.
\- potentially downward bias.
0 neutral bias.
? direction of bias unknown.

5.0 THE BENEFITS ASSOCIATED WITH THE CTR: METHODS AND CONCEPTS

The benefits analysis presented in this document provides insight into both the types and the magnitude of the benefits expected to arise as a result of implementing the CTR.[1] This chapter presents economics concepts and analytical issues associated with defining benefit categories and developing quantified and monetized benefits estimates. Section 5.1 describes the economic concepts used in the benefits analysis. Section 5.2 discusses the limitations of the analysis.

5.1 ECONOMIC CONCEPTS APPLICABLE TO THE BENEFITS ANALYSIS

This EA uses a conceptual foundation of "economic benefits" and assigns appropriate benefit categories to define and measure those benefits attributable to implementing the CTR. The sections below define terms used in that conceptual foundation and describe the concepts.

5.1.1 Economic Benefits

The term "economic benefits" refers to the dollar value associated with all the expected positive impacts of the CTR, that is, all CTR-related outcomes that lead to higher social welfare. The monetary value of benefits is the sum of the predicted changes in "consumer (and producer) surplus." These "surplus" measures are standard and widely accepted terms of applied welfare economics, and reflect the degree of well-being enjoyed by people given different levels of goods and prices (including those associated with environmental quality).

This conceptual foundation raises several relevant issues and potential limitations for the benefits analysis. First, the standard economic approach to estimating environmental benefits is anthropocentric—all benefit values arise from how environmental changes are perceived and valued by humans. This leads to the issue of how to define and measure "ecologic benefits" that may arise above and beyond the values humans place on environmental quality improvements (e.g., the protection and enhancement of habitat and living species). A related second point is that the benefits of all future outcomes are valued in present-day values. All future physical outcomes, near-term as well as long-term, associated with reduced pollutant loadings need to be predicted and then translated into the framework of present-day human activities and concerns.

[1] Hereafter, references to the benefits resulting from the CTR, refer to the benefits that occur after implementation of the NPDES permits program to meet water quality standards established with CTR criteria. For this analysis, compliance with the CTR is expected to occur immediately. In reality, compliance, and thus costs and benefits, will occur as permits come up for review and are changed in accordance with revised water quality standards.

5.1.2 Benefit Categories Applicable to the CTR

To develop a benefits analysis, first the types or categories of benefits that apply must be defined. In this analysis, EPA relied on a set of benefits categories that applies to changes in the water resource environment. As reflected in **Exhibit 5-1**, benefits are categorized according to direct use of, or contact with, the resource.

Exhibit 5-1. Potential Benefits of Water Quality Improvements

Use Benefits	
In-Stream	Commercial fisheries, shell fisheries, and aquaculture; navigation Recreation (fishing, boating, swimming, etc.) Subsistence fishing Human health risk reductions
Near-Stream	Water-enhanced non-contact recreation (picnicking, photography, jogging, camping, etc.) Non consumptive use (e.g., wildlife observation)
Option Value	Premium for uncertain future demand Premium for uncertain future supply
Diversionary	Industry/commercial (process and cooling waters) Agriculture/irrigation Municipal drinking water (treatment cost savings and/or human health risk reductions)
Aesthetic	Residing, working, traveling, and/or owning property near water, etc.
Passive Use Benefits	
Bequest	Intergenerational equity
Existence	Stewardship/preservation Vicarious consumption
Ecologic	Reduced mortality/morbidity for aquatic and terrestrial wildlife Improved reproductive success for aquatic and terrestrial wildlife Increased diversity of aquatic and terrestrial wildlife Improved conditions for successful recovery of threatened and endangered species Improved integrity of aquatic and aquatic-dependent ecosystems

Use Benefits

Use benefit categories include in-stream, near-stream, and diversionary uses of the impacted waters and encompass both consumptive (fishing) and nonconsumptive activities (e.g., wildlife observation). In most applications to pollutant reduction scenarios, the most prominent use benefit categories are those related to recreational fishing, boating, and swimming.

Whether recreational use benefits reflect society's prime motivation for environmental protection measures is unclear. Many benefits analyses, however, focus on recreational values because they are well understood, there is a large body of empirical research to draw upon, and the associated benefits tend to be quite large. Recreational activities have received considerable empirical attention from economic researchers over the past two decades. The research relating to

recreational fishing and similar activities generally indicates that water-based recreation is a highly valued activity in today's society.

Another use benefit category of potential significance for water quality regulations is human health risk reductions. Health risk reductions can be realized through actions that reduce human exposures to risk-posing contaminants, such as exposure through the consumption of fish or drinking water containing elevated levels of pollutants. Cost savings associated with the removal of contaminants from public drinking water supply systems is another form of a potential use benefit.

Passive Use (Nonuse) Benefits

Improved environmental quality can be valued by individuals apart from any past, present, or anticipated future use of the resource in question. Such passive or nonuse values have been categorized in several ways in the economics literature, typically embracing the concepts of existence, bequest, and stewardship. These nonuse values are associated with the purely public good aspects of environmental improvement in that the utility derived by an individual is entirely non-rival (an increase in utility derived by one individual does not reduce the welfare enjoyed by any other individual) and nonexcludable (there is no feasible way to exclude any individual from deriving utility from a nonuse aspect of an environmental improvement).[2]

Passive use values may be significant, but are difficult to quantify. Whereas human uses of a resource can be observed directly and valued with a range of technical economic techniques, passive use values can be ascertained only from asking survey respondents to reveal their values. The uncertainty in ascertaining passive use values has led to considerable debate as to whether they exist for applicable changes in environmental quality and, if so, whether they are of an appreciable magnitude relative to use values.[3] For the CTR, it is believed that passive use benefits are relevant and may be appreciable.

5.1.3 The Concept and Applicability of Ecologic Benefits

Among the relevant passive use values associated with the CTR are ecologic benefits associated with decreasing the level of toxic compounds found in California waters, sediment, and associated biota. Such ecologic benefits are likely to embody reduced risks of direct mortality, and increased reproductive success, in a range of important fish and wildlife species, as well as improved ecosystem health. The species include, but are not limited to, bald eagles, other

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[2] Many direct use benefits also arise from the public good context except, for example, to the extent that recreational benefits associated with improved water quality may be impeded by lack of access (private property holdings along the shoreline) or congestion. Nonuse benefits, on the other hand, are strictly of the nature of pure public goods, as neither access nor crowding are applicable to nonuse.

[3] For example, see Chapter 7 of the Regulatory Impact Analysis of the Proposed Great Lakes Water Quality Guidance, developed for U.S. EPA, April 15, 1993.

piscivorous avian species, mammalian species that feed on fish and crustaceans, and a wide range of aquatic species such as trout and other salmonids.

Some ecologic benefits clearly will have positive impacts that will manifest as use values (e.g., recreational angling, birdwatching). But of greater relevance is the applicability of ecologic benefits under the traditional passive use categories of existence and bequest values. One way to distinguish this, suggested by some analysts, is that passive use values remain anthropocentric, whereas ecologic benefits are held completely distinct from human valuation—making them additive to nonuse values. The question then becomes one of how to assign values to ecologic benefits for the purpose of setting priorities in policymaking.

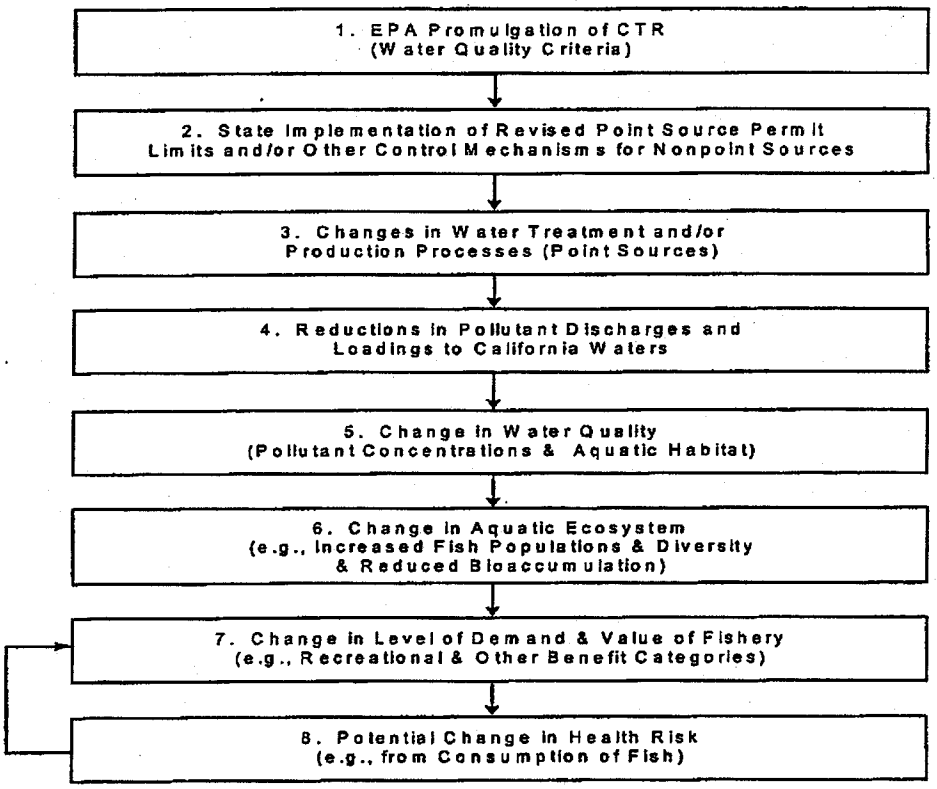
For the purposes of this EA, EPA addressed ecologic benefits in two manners. First, Chapter 6 provides a qualitative (and semi-quantitative) discussion of the physical relationships, mechanisms, and beneficial ecologic outcomes that may result from implementation of the proposed CTR. Second, for the purpose of the empirical efforts to monetize benefits, the CTR's ecologic benefits are considered to be included within passive use values and potential recreation benefits in which improved ecosystem health might be manifested.

5.2 LIMITATIONS INHERENT IN THE BENEFITS ANALYSIS

5.2.1 Causality: Linking the CTR to Beneficial Outcomes

In conducting a benefits analysis for anticipated CTR-related changes in pollutant loadings to California's waters, a chain of events must be specified and understood. As shown in **Exhibit 5-2**, this chain spans the spectrum of institutional relationships and policymaking; the technical feasibility of pollution abatement and facility-level decision-making regarding process and technology choices; the physical-chemical properties of receiving streams and their consequent linkages to biologic/ecologic responses in the aquatic environment; and human responses and values associated with these changes.

Exhibit 5-2. Chain of Events in CTR Benefits Analysis



The first two steps of Exhibit 5-2 reflect the institutional aspects of implementing the CTR, through which publication of the rule's water quality criteria is ultimately linked to state efforts to control pollutant loadings. In waters not meeting the water quality criteria, state regulators must assess how to allocate the necessary pollutant loadings reductions among various point and nonpoint sources. To the extent that these loadings reductions are assigned to point source dischargers, the state's actions will be manifested in revised point source discharge permits. The costing analysis for the CTR presumes that all loadings reductions will be generated through point source controls; however, it is possible that state regulators will implement the rule such that nonpoint source control efforts may be used in addition to some portion of the point source controls assumed here.

In steps 3 and 4, the revised state permit limits ultimately result in a change in pollutant loadings

for targeted contaminants (as well as those removed incidental to the improved wastewater treatment or process changes), from an appropriately defined set of baseline loadings. The actual manner in which the loadings reductions are achieved will depend on treatment technology and process changes selected by individual facilities. These technology choices will determine the compliance costs and loadings reductions.

Next, as shown in steps 5 and 6 of Exhibit 5-2, pollutant loading reductions (from step 4) need to be converted into changes in environmental conditions such as physical/chemical parameters (in-stream pollutant concentrations) and the consequent improvement in biota (e.g., increased diversity and size of fishery populations). In lieu of detailed water quality and ecologic (e.g., fisheries) modeling, which was infeasible within the time frame and budget limits of this analysis, this benefits analysis relies on a more ad hoc characterization of the specific pollutants addressed and their links to restricted beneficial uses of the resource. These are described, in part, in Chapter 6.

Finally, in steps 7 and 8, the analysis reaches the stage at which anthropocentric benefit concepts begin to apply, such as illustrated by the link between improved fisheries and the enhanced enjoyment realized by recreational anglers. These final steps reflect the focal point of the quantitative benefits analysis presented in Chapter 8, and are defined by the benefits categories described above. But as noted below, there are several issues that inhibit the ability to accurately forecast the extent to which the CTR may generate such benefits.

5.2.2 Temporal and Spatial Issues

As noted above, it is important to recognize the analytic challenges and resulting limitations associated with estimating the benefits of reducing discharges of toxic pollutants to all California waters. An empirical benefits assessment is a difficult and uncertain undertaking under the best of circumstances. In the case of the CTR, the challenges and limitations are magnified by several important considerations, including, but not limited to the following:

- *The time path to ecosystem recovery from near-term reductions in toxic loadings.* Many of the toxic compounds relevant to the CTR are persistent in the environment; therefore, even the total elimination of additional loadings of these compounds may not immediately alter water column or fish-tissue concentrations. A significant portion of the benefits may be realized only in the relatively distant future.

- *The geographic scope of contamination and of benefit-generating activities throughout the varied watershed ecosystems of California.* Typically, the areal extent of toxic contamination is very widespread, even if it originates from a well-defined source at a specific location. Contamination becomes even further dispersed through uptake in the food chain. Thus, the benefits of reducing toxic discharges within the state's watersheds are likely to extend beyond the boundaries of the state's "impaired" waters.

The time-path issue can be addressed, in part, through the use of alternative discounting regimes in the benefits analysis. The geographic scope issue is more difficult to address empirically, other than to recognize the high probability that beneficial results of the CTR will be realized beyond the boundaries of impaired state waters.

5.2.3 Attribution of Benefits to the CTR

For this analysis, EPA had data and information to estimate large-scale changes in water quality beyond present day conditions and then attributed the CTR for its contribution to these changes. First, the current total pollutant loadings from all sources that are contributing to the toxics-related water quality problems observed in the state are assessed. This defines the overall magnitude of the loadings "problem." Second, the share of the total loadings problem that is attributable to sources that are likely to be controlled via the CTR are estimated. Since this analysis was designed to focus only on those controls imposed on point sources, this stage of the process entailed examining the portion of total loadings originating from point sources (see Chapter 7). Third, the percent reduction in point source loadings expected due to implementation of the CTR is estimated, then applied to the share of point source loadings.

For example, if the total benefits of moving from baseline water quality to having all of California's waters completely unimpaired were estimated to be $500 million per year, and point sources contributed 40% of the toxic-weighted pollutant loadings that contributed to baseline impairments, then one would estimate (absent more refined data) that perhaps $200 million of the potential water quality benefits would be attributable to the potential elimination (100% reduction) of all point source discharges. If the CTR was expected to achieve a 50% reduction in the offending point source discharges, one would then develop an estimate of $100 million as a rough approximation of CTR-related benefits.[4] Thus, total baseline pollutant loads, and anticipated loadings reductions, are used as a means to approximate roughly the share of total potential water quality benefits that may be attributed to the rule. In the example above, the CTR would be viewed as addressing 20% of the total loadings problem (reducing by 50% the 40% of total loadings due to point sources).

Yet one of the difficulties in applying the loadings-based attribution approach is obtaining and interpreting data on baseline loadings. The problem entails two significant challenges:

- *Developing reliable estimates of both ongoing point source loadings and current nonpoint source loadings.* This is difficult because nonpoint loadings come from a wide variety of sources that are difficult to measure, including atmospheric deposition and agricultural and urban runoff. Thus, nonpoint source loading estimates are probably highly imprecise and very incomplete because they likely omit sources underestimating load estimates. Even point source estimates of

[4] Forty percent of $500 million equals $200 million; 50% of this $200 million equals $100 million.

loadings are imprecise because discharged concentrations may be below detection limits (i.e., "hidden loads" may exist in discharge data).

- *Accounting for the share of the current loadings versus those attributable to historical discharges from point and nonpoint sources.* Many of the pollutants addressed by the CTR are persistent (e.g., metals) and bioaccumulative (e.g., dioxins, PCBs, and selected agricultural chemicals). Their presence in the water column, sediment, and biota of California waters may be largely due to historical discharges rather than current loadings. The degree to which historical loads contribute to present-day concentrations will vary according to many complex contaminant- and site-specific factors. However, historical loads may, in some instances, be the predominant source of toxics-related water quality problems. In such instances, efforts to control current discharges may be of relatively limited effectiveness and value.

These complicating factors are difficult to account for in the attribution analysis. Nonetheless, they need to be kept in mind when interpreting the loadings data that are available for an apportionment analysis. These issues are described in greater detail in Chapter 7.

6.0 QUALITATIVE ASSESSMENT OF POTENTIAL ECOLOGICAL BENEFITS

This chapter describes the types of ecological benefits anticipated to result from implementation of the CTR. Improvements in ambient water quality, anticipated under the rule, are expected to result in substantial ecologic benefits through improvements in ecosystem health. This chapter provides an overview of the adverse effects of toxics on California's diverse ecological systems, shows how improved ambient water quality can translate into improved ecosystem health, and qualitatively assesses the ecologic benefits anticipated under the proposed rule.

Section 6.1 gives an overview of the diversity of ecological systems in California. Section 6.2 summarizes the occurrence and ecological effects of toxics in California aquatic systems. Section 6.3 describes how CTR-related toxics reductions may result in improved ecosystem health through ecological and toxicological interactions. Section 6.4 provides a qualitative discussion of potential ecologic benefits of the proposed rule.

6.1 ECOLOGICAL DIVERSITY OF AQUATIC ENVIRONMENTS IN CALIFORNIA

California is one of the most biologically diverse areas in the world (U.S. EPA, 1997). Within its 160,000 square miles of land, and hundreds of thousands of acres and miles of estuaries, wetlands, rivers, streams, and lakes, California harbors more unique plants and animals than any other state in the nation. The diverse climates, landscapes, habitats, and migration barriers such as mountains and deserts, have led to the evolution of a large number of isolated species and varieties of animals, many of which are found only in California (Steinhert, 1994, as cited in U.S. EPA, 1997). For example, there are 46 species of amphibians, 96 species of reptiles, 563 species of birds, 190 species of mammals, 8,000 species of plants, and 30,000 species of insects recorded in the state. In addition, 63 types of freshwater fish are found only in California (Moyle, 1994, as cited in U.S. EPA, 1997). Additionally, California's aquatic systems provide important habitat for migratory species such as waterfowl.

Unfortunately, California's ecological diversity is threatened (U.S. EPA, 1997). On average, more than 20 percent of the naturally occurring species of amphibians, reptiles, birds, and mammals are classified as endangered, threatened, or of "special concern" by state and federal agencies. California has more threatened and endangered species than any other state in the United States. Many of these species exist in or are dependent on aquatic resources during all or part of their lives, and consequently may be adversely affected by toxic discharges to surface waters (U.S. EPA, 1997).

6.2 OCCURRENCE AND ECOLOGICAL EFFECTS OF TOXICS IN CALIFORNIA AQUATIC SYSTEMS

Current concentrations of toxics in California's aquatic systems may pose substantial risk to resident and migratory biota through direct and indirect pathways of exposure in the surface waters, diets, or sediments. It appears that a variety of toxics are widely distributed throughout California, which increases the likelihood that many of the resources are exposed to concentrations potentially causing adverse effects on ecological resources (U.S. EPA, 1997). Toxicity may occur with either acute (short-term) or chronic (long-term, sublethal) exposure to contaminants. Exposure to chronic, low levels of toxics found in California's aquatic environments can adversely affect the resources by causing physiological and behavioral impairments in organisms, contamination or reduction of food-web resources, and alteration of habitats. Improving ambient water quality would put the ecological and biological resources at less risk of exposure. Improved water quality through toxics reductions would also reduce the risk of disturbances to the ecological integrity and important habitats of the biological resources of California.

A key to understanding the potential benefits of the proposed rule on the ecological resources of California is a knowledge of the occurrence, exposure pathways, and effects of toxics occurring in California's aquatic systems. These factors are discussed below.

6.2.1 Occurrence of Toxics-Related Impairments

As shown in **Exhibit 6-1**, California's aquatic ecosystems in all areas of the state exhibit impaired water quality from toxics such as metals, selenium, pesticides, and priority organics such as PCBs (U.S. EPA, 1997).[1] The Analysis of the Potential Benefits Related to Implementation of the California Toxics Rule (U.S. EPA, 1997) summarizes ambient water quality impairment in California and notes the following:

- Available data suggest that over 800,000 acres of assessed bays, estuaries, lakes, and wetlands may be impaired by one or more toxic pollutants, as are over 3,700 miles of rivers. Most notably, over two-thirds of the assessed area of both bays and saline lakes may be adversely affected by toxics.

- Inorganic pollutants such as metals and trace elements (particularly selenium) are the most significant categories of toxic pollutants affecting the water quality in assessed waters statewide. Pesticides are also associated with large areas of water quality impairment.

[1] Impaired waters are defined as those that have been rated by the State of California as medium or poor for at least one toxic pollutant or group of pollutants. California's medium and poor waters correspond to U.S. EPA's categories of not fully or partially supporting designated uses. The medium and less severely impaired waters were grouped together into the partially supporting category. The remaining waters classified as poor were placed in the not fully supporting category.

- Trace elements (especially selenium) may be responsible for water quality impairment in 52% of all bays, 55% of rivers and streams assessed, and 16% of all lakes and reservoirs. In addition, trace elements may impair water quality in all saline lakes in the state.

- Based on the areal extent of contamination and the uses of affected water bodies, San Francisco Bay and the Central Valley appear to be the areas most influenced by toxic contamination. In addition, toxics are responsible for impaired water quality in a high percentage of river and saline lake areas in the Colorado River Basin. These areas constitute those most extensively affected by toxics, but waters in all regions of California show some degree of impairment by toxics.

- Both point and nonpoint sources play a role in contributing to toxic pollution. Agriculture, primarily agricultural drainage, is the most frequently cited source of pollutants that impair rivers and is also frequently cited as a contributor to the impairment of lakes and reservoirs. Urban runoff and "other" nonpoint sources (e.g., deposition and spills) are most frequently cited as contributing factors to water quality problems in toxics-impaired bays. Mining is the most frequently cited source (mining operations may or may not be a point source), particularly for lakes and reservoirs, and toxics discharged by municipal wastewater treatment plants contribute to the impairment of a variety of water body types, particularly estuaries and wetlands.

- Toxic pollutants are of concern in a large number of waters designated for the support of terrestrial and aquatic wildlife. In addition, water quality in 175,000 acres of bays/harbors, 52,000 acres of estuaries, 102,000 acres of lakes, 1,000 miles of rivers and streams, and 11,000 acres of saline lakes that support fish spawning and/or migration may be impaired by toxics.

- Toxics may contribute to impaired water quality in approximately 176,000 acres of bays or harbors, 1,856 river miles, 230,000 acres of saline lakes, and 5,000 acres of estuaries designated for the support of rare, threatened, or endangered species.

- Currently, there are 12 fish consumption health advisories in waters covered by the CTR (9 inland water bodies and 3 enclosed bays and estuaries) because of high levels of contamination in fish tissue from mercury, PCBs, chlordane, dioxin, DDT, pesticides, and selenium. Some of these tissue contaminants are also hazardous to fish and piscivorous (fish-eating) species as well.

- Currently, there are four waterfowl health warnings for consuming waterfowl taken from the Grasslands area, Suisun Bay, San Pablo Bay, and San Francisco Bay because of elevated selenium levels in waterfowl such as duck, greater and lesser scaup, and scoters. Selenium contaminant levels are also a concern for waterfowl health.

Exhibit 6-1. Summary of Baseline California Regional Water Quality Assessments[1]

Region	Areal Extent of Toxics Impairment	Pollutants of Concern	Primary Pollutant Sources	Key Water Bodies Impaired	Ecological Resources Potentially Affected
Region 1: North Coast Region	55% of bays (16,500 acres); minor impairment of other water bodies	Metals, pesticides	Mix of point sources (municipal and industrial effluent) and nonpoint sources (agriculture and urban runoff)	Arcata Bay, Humboldt Bay	Wildlife habitat; fish spawning and migration; rare and endangered species
Region 2: San Francisco Bay	Large areas impaired by toxics, including 70% of bays (200,000 acres); 60% of wetlands (57,000 acres); 39% of rivers (244 miles); 172,000 acres impaired supporting fish spawning/migration and rare and endangered species	Metals, trace elements, priority organics	Urban runoff and other nonpoint sources affect largest areas; some impairment from municipal and industrial point sources	San Francisco Bay (Lower, Central, South) Suisun Marsh	Wildlife habitat; fish spawning and migration; rare and endangered species; waterfowl; piscivorous wildlife in San Francisco Bay, Lake Herman, Guadalupe Reservoir; and other species
Region 3: Central Coast Region	47% of lakes (11,700 acres); 36% of estuaries (1,700 acres); minor impairment of rivers and bays	Metals, pesticides	Agriculture, mining, unspecified nonpoint sources	Morro Bay, Carpinteria Marsh, Elkhorn Slough	Wildlife habitat; fish migration and spawning; rare and endangered species; piscivorous wildlife in Nacimiento River
Region 4: Los Angeles Basin	Over 90% of bays and estuaries impaired (16,000 acres); minor impairment of rivers and lakes	Pesticides, priority organics, trace elements, metals	Mix of point sources (municipal treatment, "other" point sources) and nonpoint sources (agriculture, hydrological modification, and urban runoff)	Mugu Lagoon, San Gabriel River (lower), Los Angeles River (upper)	Wildlife habitat; fish migration and spawning; rare and endangered species; piscivorous wildlife in Lake Nacimiento and Los Angeles Harbor

Exhibit 6-1. Summary of Baseline California Regional Water Quality Assessments[1] (Continued)

Region	Areal Extent of Toxics Impairment	Pollutants of Concern	Primary Pollutant Sources	Key Water Bodies Impaired	Ecological Resources Potentially Affected
Region 5: Central Valley Region	Large areas impaired by toxics, including 100% of estuaries (48,000 acres); 23% of lakes (120,000 acres); 21% of rivers (1,200 miles); 48,000 acres of Delta waterways impaired for fish spawning/migration and rare and endangered species	Metals, trace elements	Agriculture, mining; smaller areas affected by municipal treatment, urban runoff, storm sewers, and other nonpoint sources	Delta Waterways, Clear Lake, American River, Feather River, Sacramento River, Grasslands, Marshes, Shasta Lake	Wildlife habitat; fish spawning and migration; rare and endangered species, piscivorous wildlife in Clear Lake, Lake Berryessa, and Grasslands area; waterfowl in Grasslands area
Region 6: Lahontan Region	34% of saline lakes (66,000 acres); 19% of lakes (36,000 acres); 13% of rivers (372 miles)	Metals, trace elements, priority organics	Naturally occurring levels of metals and trace elements; lesser areas affected by agriculture, land development, and mining	Eagle Lake, Owens River, Truckee River, Honey Lake	Wildlife habitat; fish spawning and migration; rare and endangered species
Region 7: Colorado River Basin	60% of rivers (1,400 miles) impaired; 220,000 acres of saline lake (Salton Sea) supporting rare and endangered species and wildlife	Pesticides, trace elements	Agriculture	Salton Sea	Wildlife habitat; rare and endangered species; piscivorous wildlife and waterfowl in Salton Sea
Region 8: Santa Ana River Basin	Over 90% of bays and estuaries impaired (4,000 acres); 27% of lakes (4,000 acres)	Metals, pesticides	Primarily nonpoint sources including agriculture, urban runoff, and land development	Upper Newport Bay	Wildlife habitat; fish spawning and migration; rare and endangered species
Region 9: San Diego Basin	14% of estuaries; minor impairment of other water bodies; 239 acres San Diego Bay impaired supporting fish spawning/ migration and rare and endangered species	Metals, pesticides, priority organics, trace elements	Estuaries affected by land disposal; other water bodies affected by diverse mix of point and nonpoint sources.	San Diego Bay, Tijuana River Estuary	Wildlife habitat; fish spawning and migration; rare and endangered species

[1] Based on 1994 assessment of water quality. Some key water bodies impaired by toxics have changed since that time; however, more recent data were not used in the preparation of this report due to time constraints.

Source: U.S. EPA (1997).

This summary of water quality impairment indeed reveals that a variety of aquatic and terrestrial biota are exposed to the toxics regulated by the CTR.

6.2.2 Exposure Pathways

Toxics present in California's aquatic systems can affect ecological resources through direct or indirect pathways of exposure. Direct pathways of exposure occur when natural resources come in direct contact, either singularly or in combination, with toxics in the water column, sediments, or diet. Indirect pathways of exposure occur when habitat resources (e.g., spawning beds, prey sources) have been reduced or otherwise altered by toxics. Toxics also may be bioaccumulated in aquatic organisms, making them available to terrestrial predators dependent on the aquatic food web of the contaminated system. The extent to which the organisms are adversely affected largely depends on the pathway and duration of exposure as well as the concentration and type of toxics present in the pathway.

6.2.3 Potential Effects of Toxics on Ecological Resources

Ecological resources potentially affected under state implementation include biota and ecosystem function and integrity.

Effects on Biota

Biological organisms are effective receptors for toxics in aquatic systems through the uptake, accumulation, and eventual biological disposition of contaminants. Uptake of toxics results from the following various exposure pathways, singularly or in combination: diet, water, and sediment. Accumulated toxics associated with ambient waters may concentrate in various tissues and organs of biota. The specific tissues/organs affected depend on the exposure pathways, the exposure concentrations, and the ability to metabolize or excrete the accumulated contaminants. An organism's ability to metabolize contaminants largely depends on the presence/absence and relative abundance of various enzymes necessary to transform different components into excretable compounds.

The effects of toxics on aquatic resources must be evaluated because even low contaminant concentrations in water, sediment, or diet may impair fitness, produce adverse physiological effects that lead to death, or lower long-term survivability in the wild. There is extensive documentation of the long-term, injurious effects of inorganic (e.g., heavy metals) and organic (e.g., polychlorinated biphenyls, pesticides, aromatic hydrocarbons) contaminants at relatively low concentrations to aquatic biota (Rand and Petrocelli, 1985; Hoffman et al., 1995).

Exposure to contaminants found in California's aquatic systems can affect various biological levels of organization, resulting in four identified biotic responses: lethal toxicity, sublethal

toxicity, bioaccumulation, and habitat alteration. These biotic responses provide broad categorization for a multitude of specific biotic responses **(see Exhibit 6-2).**

Exhibit 6-2. Biological Organization Levels Associated with Responses to Toxics in Water

Biotic Response	Subcellular	Cellular	Organism	Population	Community	Ecosystem
Lethal Toxicity	▯	▯	▯	▯	▯	▯
Sublethal Toxicity	▯	▯	▯	▯	▯	▯
Bioaccumulation	▯	▯	▯	▯	▯	▯
Habitat Alteration			▯	▯	▯	▯

Lethal toxicity refers to the direct disruption of subcellular or cellular physiological activities that result in death of the organism. The death of individuals from populations can influence the future reproductive viability of populations, and in turn may influence organisms at higher trophic levels. Sublethal toxicity also involves interference of subcellular and cellular processes, but does not result in immediate death; death may occur because of impaired behavior, or impaired physiological or biochemical processes.

Bioaccumulation of contaminants found in California aquatic systems is important because the health of organisms may be affected (e.g., reducing growth or reproduction; increasing susceptibility to disease). Bioaccumulation also results in additional pathways for contaminant transfer throughout the food chain. Impaired physiology or contaminant transfer through food chains owing to bioaccumulation can have dramatic impacts on all levels of biological organization. For instance, accumulated contaminants (or metabolites of these contaminants) transferred through food webs may concentrate in food sources of piscivorous fish, which can adversely affect important recreational or commercial fisheries.

Habitat alteration includes effects on the physical and chemical environment that can result in unsuitable habitat for both resident and migratory biota at the level of the organism and the population. For example, biodegradation of organic contaminants by sediment microbes results in anoxic conditions unsuitable for benthos. The physical and chemical alteration of particular habitats can shift species composition, abundance, and diversity. Any change in species composition directly reflects altered community structure, and can alter ecosystem functions.

Toxics of particular concern in California are listed in **Exhibit 6-3**, along with their potential adverse effects on biota. In addition to the potential adverse effects of toxics discussed above, exposure to certain toxics present in California's aquatic systems, including aromatic hydrocarbons and heavy metals, can increase the rate of genetic mutations. Increased rates of genetic mutations can reduce the fitness of individuals and populations, especially in contaminated areas providing breeding or spawning habitat because there would be greater risk to embryonic life stages undergoing rapid development.

Exhibit 6-3. Overview of Adverse Effects of Toxics

Toxic of Concern	Potential Affected Ecological Resource in California	Potential Adverse Effects on Biota[1]	Reference
Arsenic	Aquatic biota Birds Mammals Water Sediment	Reduced growth and survival Impaired reproduction Impaired physiology Decreased resistance to infection Mutagenic Teratogenic Carcinogenic	Eisler (1988a)
Cadmium	Aquatic biota Birds Mammals Water Sediment	Reduced growth and survival Impaired reproduction Possible mutagen Teratogenic Carcinogenic	Eisler (1985a)
Chromium (III and VI)	Aquatic biota Birds Mammals Water Sediment	Reduced growth and survival Impaired reproduction Mutagenic Teratogenic Carcinogenic	Eisler (1986a)
Copper	Aquatic biota Birds Mammals Water Sediment	Reduced growth and survival Impaired reproduction Impaired metabolism	U.S. EPA (1985); Goyer (1991)
Dioxin	Aquatic biota Birds Mammals Water Sediment	Reduced growth and survival Impaired reproduction Compromised immunity Mutagenic Teratogenic Carcinogenic	Eisler (1986b)
Endosulfan	Aquatic biota Birds Mammals Water Sediment	Reduced growth and survival Impaired reproduction Impaired behavior Suspected mutagen	Verschueren (1983); Smith (1991)
Lead	Aquatic biota Birds Mammals Water Sediment	Reduced growth and survival Impaired reproduction Impaired development Impaired metabolism	Eisler (1988b)

Exhibit 6-3. Overview of Adverse Effects of Toxics (Continued)

Toxic of Concern	Potential Affected Ecological Resource in California	Potential Adverse Effects on Biota[1]	Reference
Mercury	Aquatic biota Birds Mammals Water Sediment	Reduced growth and survival Reduced reproduction Impaired development Impaired behavior Mutagenic Teratogenic Carcinogenic	Eisler (1987a)
Nickel	Aquatic biota Birds Mammals Water Sediment	Reduced growth and survival Reduced reproduction Carcinogenic	U.S. EPA (1980a)
Polycyclic Aromatic Hydrocarbons (PAHs)	Aquatic biota Birds Mammals Water Sediment	Reduced growth and survival Reduced reproduction Compromised immunity Mutagenic (4-7 Ringed PAHs) Teratogenic (4-7 Ringed PAHs) Carcinogenic (4-7 Ringed PAHs)	Eisler (1987b)
Polychlorinated Biphenyls (PCBs)	Aquatic biota Birds Mammals Water Sediment	Reduced growth and survival Reduced reproduction Impaired behavior Compromised immunity Mutagenic Teratogenic Carcinogenic	Eisler (1986c)
Selenium	Aquatic biota Birds Mammals Water Sediment	Reduced growth and survival Reduced reproduction Impaired behavior Impaired physiology	Eisler (1985b)
Silver	Aquatic biota Birds Mammals Water Sediment	Reduced growth and survival Reduced reproduction Impaired physiology	Goyer (1991); U.S. EPA (1980b)
Zinc	Aquatic biota Birds Mammals Water Sediment	Reduced growth and survival Impaired physiology Teratogenic to amphibians Reduced reproduction	Eisler (1993)

[1] The potential for adverse effects to ecological resources are dependent on numerous factors, including the exposure route, the exposure duration, the dose, the sensitivity of the organism, and the bioavailability of the chemical. Information in this table describes the common biological effects associated with each toxic of concern (U.S. EPA, 1997). Effects may not be present for all ecological resources listed. In addition, concentrations of these toxic compounds in California may not be high enough to result in these adverse effects on biota.

Effects on Ecosystems

In addition to adverse effects on biota, toxics also may adversely affect ecosystem function and integrity through direct and indirect effects on biota. The effects of toxics in ecosystems are complex and difficult to estimate because of the diversity of species assemblages and trophic interactions (Barron and Woodburn, 1995). For example, predators may switch to alternate prey (Eaton et al., 1985), or phytoplankton abundance may be maintained by changes in the dominant algae species (Brock et al., 1992). Also, several species may perform similar functions, with sensitive species replaced by more contaminant tolerant species. While these changes may result in overall ecosystem resistance to toxics, there could be major changes in ecosystem structure (Barron and Woodburn, 1995). Contaminant effects on ecosystem structure, however, are likely to be specific to the type and location of the water body and the toxic exposure scenario.

6.3 POTENTIAL ECOLOGIC BENEFITS OF THE RULE

As discussed in Chapter 5, ecosystems and their biological resources provide benefits through enhanced ecological services that often manifest as direct use values, passive use values and, to the extent not reflected elsewhere, ecologic benefits.

This section provides a qualitative description of potential ecologic benefits resulting from improvements in ecosystem health under the proposed rule. A qualitative description of ecologic benefits is provided because of the complexity and diversity of California aquatic systems and the diversity of ecological receptors; the multitude of contaminants and exposure conditions; the complexity of ecosystem structure and function; and uncertainty regarding the extent to which the CTR will result in toxics loading reductions significant enough to generate appreciable changes in ambient concentration and ecosystem health. However, improved water quality may provide potential benefits to the ecological resources ". . . that exist in or are dependent on more than 800,000 acres of assessed bays, estuaries, lakes, and wetlands and more than 3,700 miles of rivers that are now currently impaired by toxic pollutants" (U.S. EPA, 1997). The extent, magnitude, and nature of the ecologic benefits accruing under the CTR will depend on the specific ecosystems and toxics affected, baseline conditions, the degree and type of ambient water quality improvements, and the time horizon for improvement.

Toxics reductions under the CTR may provide ecologic benefits through increased ecosystem stability, resilience, and overall health (U.S. EPA, 1997). Benefits are difficult to quantify because of the complexity, scale, and uncertainties of the interaction of the multitude of ecological systems and toxics to be affected by the proposed rule. However, ecologic benefits from the proposed rule may be substantial because of the extensive variety, proportion, and geographic area of the affected aquatic systems, the diversity and uniqueness of California ecological resources, and the large number of toxics to be regulated under the CTR (U.S. EPA, 1997).

Without conducting a complete analysis as described above, EPA concludes that potential ecologic benefits from implementation of the CTR may include (U.S. EPA, 1997):

- Reductions in toxics loadings that lead to improved conditions for California fish spawning and/or migration in bays/harbors and estuaries, lakes, rivers, streams, and saline lakes

- Reductions in bioaccumulative chemicals of concern that currently may affect fish and wildlife throughout the state, including selenium, mercury, PCBs, dioxins, and chlorinated pesticides

- Reductions in toxics that improve conditions for the successful recovery of federal and state threatened and endangered species, such as the delta smelt, desert pupfish, California brown pelican, bald eagle, California clapper rail, California tiger salamander, and western snowy plover

- Reductions in toxics that decrease adverse toxics-related impacts on aquatic and terrestrial wildlife in two important areas of California: the San Francisco Bay watershed and the Central Valley (see case studies in U.S. EPA, 1997)

- Reductions in the concentrations of both selenium and pesticides in the waters that feed the Salton Sea that may improve conditions for the restoration and maintenance of currently declining populations of wildlife, including threatened and endangered species such as the California brown pelican, peregrine falcon, bald eagle, Yuma clapper rail, and desert pupfish (see Case Studies in U.S. EPA, 1997)

- Improved water quality and associated improvements in survival, growth, and reproductive capacity of aquatic and aquatic-dependent organisms that will help restore and sustain California's ecological diversity.

7.0 BENEFITS METHODOLOGY ISSUES: CONTRIBUTION OF POINT SOURCES TO TOXICS-RELATED WATER QUALITY PROBLEMS

Estimating the benefits of implementation of the CTR is difficult because there is limited information regarding the contribution of point sources to the toxic-related water quality problems in California. This issue of attribution has important implications for the potential benefits of point source controls. Benefits analyses of water quality regulations may be able to utilize existing literature, applied research, and data to estimate society's values for water quality improvements. Often, there are limited data with which the contribution of point source controls to these improvements can be discerned.

To estimate the potential benefits of the CTR, EPA evaluated the limited available data on loadings from various sources to California watersheds. Based on these data, EPA developed ranges of values to reflect the potential contribution of point sources to current toxic-related water quality problems in San Francisco Bay, other bays and estuaries, and freshwater. EPA then used these assumptions to estimate the benefits of the proposed rule (see Chapter 8). This chapter describes the data EPA used to develop the attribution assumptions, and the uncertainties surrounding these estimates, as presented originally in U.S. EPA (1997).

EPA solicited additional data and information on the relative contribution of point sources to toxic pollutant loadings in California waters in the EA that accompanied the proposed rule, however, commenters did not submit any new data. EPA then conducted a new literature search and contacted universities and organizations in search of additional data and studies. In general, the studies found very little detailed information and data. One study of the Santa Monica Bay watershed (California Regional Water Quality Control Board, 1997), however, contains an assessment of the relative loadings from point and nonpoint sources. As described in Section 7.2, EPA updated its analysis to incorporate this information.

7.1 SAN FRANCISCO BAY

EPA used two sources to characterize the relative contributions of point and nonpoint sources of toxic loadings in San Francisco Bay: Davis et al. (1991) and National Oceanic and Atmospheric Administration (NOAA)(1988a). Davis et al. estimated that 5,000 to 40,000 metric tons of at least 65 different pollutants are released annually into the San Francisco estuary from both point and nonpoint sources. They estimated point source loadings based on municipal (POTW) and industrial NPDES effluent monitoring data from 1984 to 1987. They estimated nonpoint source loadings using estimates of urban and nonurban runoff, riverine inputs, atmospheric deposition, oil spills, and contributions from dredging activities. Estimates of urban runoff and dredging came from Gunther et al. (1987)[1]. Estimates of nonurban runoff were based on a NOAA model that factors in sediment loss from nonurban lands and average trace metal concentrations in soil.

[1] Other studies suggest that Gunther et al. (1987) may have underestimated the contribution from dredging activities.

Riverine inputs were based on pollutants from the Sacramento and San Joaquin rivers. All pollutants transported past the cities of Sacramento and Vernalis were considered riverine input from the Sacramento and San Joaquin Rivers, respectively. The loading from the Sacramento River was based on a 1987–88 study of selenium cycling conducted by the California Department of Water Resource. The loading from the San Joaquin River was based on 1985–87 water quality data collected by the U.S. Geological Survey (USGS). Atmospheric deposition loadings were based on measurements in other parts of the United States, as reported in Gunther et al. (1987).

NOAA (1988a) estimated that approximately 22,000 metric tons of toxic substances are released annually into the San Francisco estuary. They estimated point source loadings based on municipal (POTW) and industrial effluent monitoring data. Estimates of nonpoint source loadings include urban and nonurban runoff, and riverine inputs. NOAA (1988a) estimated urban runoff by combining runoff coefficients and pollutant concentrations with:

- Estimates of total county and city urban land area and population (U.S. Bureau of Census, 1980)
- POTW wastewater and storm water conveyance and treatment data (U.S. EPA, 1982)
- Weather station and precipitation data (provided by NOAA's National Climatic Data Center)
- Information on urban land use activities (obtained from USGS's Land Use Data Analysis System).

To estimate the contribution of nonurban runoff to loadings, NOAA (1988a) examined areas where:

- Farming, silviculture, or other activities have exposed soil to wind, rain, and runoff
- Soil is most erodible
- Large amounts of chemical fertilizers and pesticides have been applied
- Sufficient runoff exists to transport pollutants.

NOAA (1988a) obtained the majority of the data for its analysis from the USGS's Land Use Data Analysis System, the U.S. Department of Agriculture's 1982 National Resource Inventory, and a study by Shacklette and Boerngen (1984). NOAA (1988a) also estimated riverine inputs from the Sacramento and San Joaquin rivers using raw USGS data in a simulation model.

Exhibit 7-1 presents the estimated contribution of point sources to toxic loadings in the San Francisco Bay based on the Davis et al. (1991) and NOAA (1988a) studies. Using these studies, EPA developed toxicity-weighted averages across the pollutants evaluated to reflect the contribution of point sources to San Francisco Bay. This resulted in an estimate of 3.4% for the NOAA data based on the median weight for the class of chlorinated hydrocarbon pesticides,[2] and a range of 1.5% to 7.1% for the Davis et al. data. In light of the uncertainties in the estimates, for the purposes of estimating the potential benefits of the point source controls of the CTR, EPA assumed that point sources contribute between 1% and 10% of total toxic loadings to San Francisco Bay.

Exhibit 7.1 Estimated Contribution of Point Sources to Toxic Pollutant Loadings in San Francisco Bay (Toxic-Weighted)

Pollutant	NOAA[1]	Davis et al.[2]
Zinc	5.2%	4.0–18.9%
Copper	5.5%	4.0–11.9%
Nickel	Not Estimated	26.4–27.6%
Lead	7.4%	2.3–8.5%
Chromium	2.6%	0.8–5.7%
Arsenic	11.4%	3.8–6.1%
Cadmium	15.6%	29.5–64.8%
Selenium	Not Estimated	28.4–28.4%
Mercury	6.9%	26.4–51.8%
Chlorinated Hydrocarbon Pesticides	51.5%	Not Estimated

[1] Toxic-weighting based on loadings from the NOAA (1988a)
[2] Source: U.S. EPA (1997); range based on data from Davis et al. (1991).

EPA's analysis is subject to a number of uncertainties and limitations. First, Davis et al. and NOAA relied on assumptions about concentrations below the detection limit to estimate pollutant loadings. However, the concentration of pollutants below the deduction limit is unknown. Second, studies do not include estimates for some point and nonpoint sources of pollutants such as "historic" loadings from contaminated sediment or point source mine drainage. Third, Davis et al. and NOAA classify riverine inputs as nonpoint sources. It is possible that a portion of these riverine inputs is attributable to point sources; however, this could not be estimated based on available data. Fourth, the data from both studies are based on discharges from the early and mid-1980s and, therefore, may not be representative of current conditions in San Francisco Bay. Finally, Davis et al. did not estimate the contribution from pollutants, other than selenium, in the Sacramento River, and did not have local data for the estimates of urban runoff and atmospheric deposition. The use of data on atmospheric deposition from other parts of the United States would tend to overestimate nonpoint source loadings (and thus underestimate point source loadings) because there are relatively fewer air sources of toxics that

[2] The weights for hydrocarbon pesticides range from 0.35 for trichlorophenol to 57,000 for dieldrin, with a median for the class of 100.

might reach the bay given the prevailing westerly winds off the ocean.

7.2 OTHER BAYS AND ESTUARIES

EPA used NOAA's National Coastal Pollutant Discharge Inventory (1988b and 1988c) to estimate the relative contribution of point sources to toxic loading in five California bays: San Diego, Humboldt, Monterey, Santa Monica, and San Pedro (see **Exhibit 7-2**)[3].

Exhibit 7-2. Estimated Contribution of Point Sources to Toxic Pollutant Loadings in Other California Bays (Toxic-Weighted)[1]

Pollutant	Nonurban Bays		Urban Bays		
	Monterey Bay	Humboldt Bay	San Diego Bay	Santa Monica Bay	San Pedro Bay
Arsenic	57.1%	32.7%	87.7%	89.9%	87.4%
Cadmium	83.8%	40.2%	100.0%	100.0%	100.0%
Chromium	15.2%	34.8%	95.2%	88.4%	87.8%
Copper	16.1%	17.0%	86.8%	89.4%	78.7%
Lead	29.9%	19.4%	41.0%	66.7%	26.9%
Mercury	75.6%	8.7%	90.1%	87.9%	81.3%
Zinc	23.7%	27.0%	80.9%	78.2%	70.6%
Chlorinated hydrocarbon pesticides	N/A	N/A	93.0%	99.1%	94.0%
Toxic-Weighted Average	**22.2%**	**33.1%**	**91.1-92.0%***	**87.9-93.3%***	**82.6-88.5%***

[1] Toxic-weighting based on loadings from NOAA, 1981-1984 (nonurban bays) and NOAA, 1988b and 1988c (urban bays). NOAA assessed the following point sources: POTWs, industrial effluents, and power plant effluent. NOAA assessed the following nonpoint sources: urban runoff, cropland runoff, forestland runoff, rangeland runoff, irrigation return flows, and upstream sources.

* Lower bound of range based on median toxic weight for pesticides (100); upper bound of range based on mean toxic weight for pesticides (5,300).

Source: U.S. EPA (1997).

EPA developed toxicity-weighted averages across the pollutants evaluated to reflect the contribution of point sources to each bay. The data showed point sources account for 23.2% and 33.1% of loadings in the nonurban bays (Monterey and Humboldt Bays, respectively), and 91.1%, 87.9%, and 82.6% in the urban bays (San Diego, Santa Monica, and San Pedro Bays, respectively).

In addition, for this revised analysis, EPA combined additional data for the Santa Monica Bay watershed (California Regional Water Quality Control Board, 1997) for seven pollutants with the NOAA data. These new data suggest that point source loadings of copper, lead, and zinc decreased between 1986 and 1992 and that, currently, nonpoint sources are the predominant

[3] Only two of these bays (San Diego and Humboldt) are enclosed bays covered by the rule. EPA assumed that the data for the non-enclosed bays generally will be applicable to enclosed bays.

contributors of lead and zinc (California Regional Water Quality Control Board, 1997)[4]. However, this additional data for copper, lead, and zinc does not change the toxic-weighted average for Santa Monica Bay. This is because mercury and chromium VI have such high toxic weights (500 and 35.5, respectively) compared to the toxic weights for arsenic, cadmium, copper, lead, and zinc (4, 5.2, 0.47, 1.8, and 0.051, respectively). As a result, the overall toxic-weighted average is more closely linked to the point source contribution of mercury and chromium-VI and is not influenced by the new data for Santa Monica Bay.

In general, the available data indicated that urban bays tend to have a greater portion of toxic loadings originating from point sources than do nonurban bays. The data also reveal that the contribution of point sources is much higher in the San Diego, Santa Monica, and San Pedro urban bays than EPA estimated for the urban San Francisco Bay. The reason for this discrepancy is not readily apparent. For urban bays, EPA averaged the mean toxic-weighted point source contributions for the three urban bays as well as the midpoint of the range of point source contribution for San Francisco Bay [(91.1 + 87.9 + 82.6 + 5.0)/4 = 66.7] to estimate that point sources account for 67% of toxic-weighted loadings to urban bays. EPA estimated that point sources account for 28% of toxic-weighted loadings to nonurban bays by averaging the mean toxic-weighted point source contributions for the two nonurban bays [(23.2 + 33.1)/2 = 28.2]. However, these percentages cannot be directly used to attribute benefits to the CTR because EPA was not able to estimate the proportion of benefits that occur in urban bays versus nonurban bays. Therefore, EPA developed a weighted average estimate of the point source contribution of toxic pollutant loadings to California bays and estuaries based on the population and land area around urban and nonurban bays.

Scaling by population implicitly assumes that benefits are proportional to the population living in different areas (e.g., that more fishing occurs in urban bays than nonurban bays) (U.S. EPA, 1997). EPA identified the relevant enclosed bays covered by the rule,[5] and obtained total population living within 10 miles of each bay.[6] The method yields an estimate of approximately 3.1 million people living near urban bays, and 275,000 people living near nonurban bays (U.S. EPA, 1997), and results in a population-weighted attribution estimate of 64%. To scale by land area surrounding the bays, EPA compiled data on total acreage of each of the urban and nonurban bays from California's WQA database (State Water Resources Control Board, 1994) (U.S. EPA, 1997). This approach yielded a land area-weighted average estimate of 42%. EPA used this

[4] The point source contributions for copper, lead, and zinc were 89.9%, 52.6%, and 75.1% respectively in 1986. In 1992, these contributions were 59.1%, 6.7%, and 40.4% (California Regional Water Quality Control Board, 1987).

[5] Urban bays include San Diego Bay, Mission Bay, Upper and Lower Newport Bay, and Los Angeles-Long Beach Harbor. Nonurban bays include Humboldt Bay, Bodega Harbor, Morro Bay, Drakes's Estero, Tomales Bay, and Carmel Bay (State Water Resources Control Board, 1991).

[6] Census tract-level population data were taken from the 1990 census and aggregated using geographic information system software.

42% to 64% range to attribute potential benefits of the implementation of the CTR in bays and estuaries. The limitations and uncertainties noted in Section 7.1 also apply to this estimated range.

7.3 FRESHWATER RESOURCES

Because of data and resource limitations, EPA could not assess the relative source contribution to specific freshwater resources in California. EPA used data for the Sacramento and San Joaquin rivers, and information on the influence of permitted mines on freshwaters, to develop a statewide estimate of the relative contribution of point sources to toxic pollutant loadings in freshwater. This estimate is based on data from the Central Valley RWQCB. The data include loadings from urban runoff, agricultural drainage, mining drainage, and industrial and municipal point sources. **Exhibit 7-3** shows the percentage of loadings attributable to point sources on each river.

Exhibit 7-3. Estimated Contribution of Point Sources to Toxic Pollutant Loadings in California Rivers (Toxic-Weighted)[1]

Pollutant	Sacramento River	San Joaquin River
Arsenic	22.3%	3.1%
Cadmium	81.6%	5.8%
Copper	72.4%	2.9%
Lead	6.1%	2.8%
Zinc	72.9%	7.2%

[1] Toxic-weighting based on loadings from Central Valley RWQCB, Mass Emission Strategy – Load Estimates.
Source: U.S. EPA (1997).

Because of the influence of permitted mine discharges on the Sacramento River, point source contributions for all pollutants are greater for the Sacramento River than for the San Joaquin River. Using a toxicity-weighted average across all five pollutants, EPA estimated that 46.3% of loadings to the Sacramento River and 3.4% of loadings to the San Joaquin River are associated with point sources.

EPA then used these estimates to develop a weighted-average contribution of point sources to toxic loadings in freshwater by using the estimate for the Sacramento River for river miles under the influence of major permitted mines and the estimate for the San Joaquin River for all other river miles. In California, there are five major mines that have NPDES permits, all of which are located in the Sacramento River watershed.[7] Therefore, EPA estimated that 0.001 percent of all lake acres and 0.05 percent of all river miles are under the influence of the five major NPDES permitted mines (Water Resources Control Board, 1996). Using the estimated point source

[7] A very small percentage of mines in California are permitted because most mines are inactive. EPA estimated river miles under the influence of mining for Lake Shasta (Alta Gold mine and Remedial Recovery), Sacramento River (Iron Mountain mine), South Feather River (Plumas Gold mine), and Pine Creek (U.S. Tungsten Corporation). This analysis does not account for multiple mines under a single permit.

contribution for the Sacramento River and the San Joaquin River, 46% and 30% respectively, EPA then calculated a weighted-average point source contribution of 3% for lakes and 3% for rivers.[8] The 3% for freshwater lakes also is applied to saline lakes.

EPA's analysis for freshwater also is subject to a number of uncertainties and limitations. First, the concentration of pollutants below the detection limit is not known. For this analysis, all samples below the detection limit were assumed to be zero. Second, only a subset of cities in the Central Valley region were incorporated in the estimate of urban runoff. Third, the use of effluent concentration data from the Sacramento County POTW may not be representative of effluent from other facilities. Finally, historic loadings in sediments may not be accounted for in the estimates.

7.4 SUMMARY

Exhibit 7-4 summarizes EPA's estimate of the relative contribution of point sources to total loadings of toxic pollutants in California waters. These estimates represent the toxic-weighted average across the pollutants evaluated. **Exhibit 7-5** summarizes the *key* uncertainties and limitations in the estimates. Because the direction and magnitude of biases generally is not known, it is difficult to assess their overall impact on the estimates.

[8] The calculation assumes a 46% point source contribution for mining impaired water bodies (0.001% of lakes and 0.05% of rivers) and a 3% contribution in other water bodies. The calculations are $0.46 \times (0.001\%) + 0.03 \times (1\text{-}0.001\%) = 3.00\%$; $0.46 \times (0.05\%) + 0.03 \times (1\text{-}0.05\%) = 3.02\%$.

Exhibit 7-4. Estimated Share of Total Toxic Pollutant Loadings Attributable to Point Sources for California Water Bodies

Water Body	Toxic Pollutant Loadings Attributable to Point Sources (%)
San Francisco Bay	1-10
Other bays and estuaries	42–64[1]
Freshwaters and saline lakes	3

[1] The lower-bound estimate is for nonurban bays and the upper-bound estimate is for urban bays.

Source: Based on EPA analysis of NOAA (1988a); NOAA (1988b); NOAA (1988c); Davis, et al. (1991); California RWQCB (1997); Central Valley RWQCB; and California 1994 WQA database, as originally presented in U.S. EPA (1997).

Exhibit 7-5. Key Uncertainties in the Analysis of Relative Point Source Contribution

Uncertainty	Relative Significance	Potential Direction of Bias on Point Source Contribution to Total Loadings		
		Overstate	Understate	Indeterminant
Generalized from limited loadings data for a small set of water bodies to the extensive system of salt and freshwater in California.	High			□
Analysis based on a limited set of pollutants. Little information on pesticides. No information on PCBs, dioxin, and certain metals (e.g., silver).	High		□	
"Historic" loadings not fully accounted for.	High	□		
Studies used classify riverine inputs as nonpoint sources. Some of these loadings may have originated from point sources.	Medium		□	
Point source contributions for San Francisco Bay are much lower than for the other urban bays.	Medium			□

Source: Adapted from U.S. EPA (1997).

8.0 QUANTIFIED AND MONETIZED BENEFITS ESTIMATES

EPA quantified and monetized three categories of potential benefits from implementation of the CTR: (1) human health risk reductions, (2) recreational angling benefits, and (3) passive use values. These benefits estimates are presented in Sections 8.1 through 8.3. In addition, Section 8.4 describes potential categories of benefits that are expected to result from the rule but that EPA could not monetize. Section 8.5 provides a summary of the benefits estimates.

The analysis presented below resembles the analysis that accompanied the proposed CTR (the results have been updated to incorporate the revised estimates of pollutant loading reductions and a slight modification to how the reductions are incorporated). However, in response to comments on the proposed CTR and accompanying EA, EPA continued to search the literature for California-specific valuation research that may be relevant to estimating the benefits of the rule. Below, the results of three studies (Carson et al., 1994; Loomis et al., 1991; and Cooper and Loomis, 1991) are incorporated into this revised analysis. In addition, where possible, EPA updated the data underlying the analysis.

8.1 HUMAN HEALTH BENEFITS

EPA assessed the human health risks from the consumption of contaminated fish tissue, and the potential reductions in these risks expected to result from implementation of the CTR, for two populations of anglers: San Francisco Bay anglers and freshwater anglers in California.

San Francisco Bay represents one of the most important noncommercial fisheries among the bays and estuaries covered by the rule. EPA conducted the assessment for San Francisco Bay anglers as a case study example of the health risks for anglers fishing in enclosed bays and estuaries. In addition, the bay has been adversely affected by toxic pollution, as evidenced by a recently issued fish consumption advisory (FCA). This advisory is due to the concentrations of mercury, PCBs, dioxin, and pesticides in fish from the bay. Despite the issuance of the advisory in December 1994, the bay remains a popular area for anglers (U.S. EPA, 1997). However, because only two other health advisories have been issued for enclosed bays and estuaries in California, this case study may represent an upper-bound estimate of baseline health risks associated with enclosed bays and estuaries.

The freshwater resources in the state also have been adversely affected by toxic pollution. Fish consumption advisories have been issued for nine inland water bodies, including numerous reservoirs, rivers, and creeks in Santa Clara County and the Grassland Area of the Kesterson National Wildlife Refuge in Merced County. **Exhibit 8-1** summarizes the FCAs in place for inland waters and enclosed bays and estuaries in California. **Exhibit 8-2** illustrates the location of these FCAs, as well as the location of NPDES-permitted point source discharges and the density of resident fishing license sales by county.

Exhibit 8-1. Fish Consumption Health Advisories in California

Water Body/Location	Advisory for General Population		Advisory for Sensitive Populations[1]		Contaminants of Concern
	Avoid Consumption	Limit Consumption[2]	Avoid Consumption	Limit Consumption[2]	
Inland Surface Waters					
New River	All species		All species		Pesticides Biological contaminants
Clear Lake (Lake County)		1 lb per month - Largemouth bass over 13" - Channel catfish over 24" - Crappie over 12" 2 lbs per month - Largemouth bass under 13" 3 lbs per month - Channel catfish under 24" - Crappie under 12" - White catfish 6 lbs per month - Brown bullhead - Sacramento blackfish 10 lbs per month - Hitch	All species		Mercury
Lake Nacimiento (San Luis Obispo County)		4 meals per month - Largemouth bass	Largemouth bass		Mercury
Lake Herman (Solano County)		1 lb per month - Largemouth bass	Catfish		Mercury
Lake Berryessa (Napa County)		1 lb per month - Largemouth bass over 15" - Smallmouth bass 2 lbs per month - Largemouth bass under 15" - White catfish 3 lbs per month - Channel catfish 10 lbs per month - Rainbow trout	All fish		Mercury
Grassland Area Kesterson National Wildlife Refuge (Merced County)	Catfish	Max. of 4 oz. every 2 weeks - All fish	All fish		Selenium
Salton Sea		Max. of 4 oz. every 2 weeks - Croaker - Sargo - Tilapia - Orangemouth corvina	All fish		Selenium
Bays and Estuaries[3]					
San Francisco Bay	Striped bass> 35"	Maximum of 2 meals per month - All sport fish	Striped bass> 27" Shark> 24"	Maximum of 1 meal per month - All sport fish	Mercury PCBs Dioxins Pesticides
Belmont Pier/Pier J (Los Angeles Harbor)		Maximum of 2 meals per month - Surf perch			DDT, PCBs
Los Angeles/Long Beach Harbors (esp. Cabrillo Pier)	White croaker	Maximum of 2 meals per month - Queenfish - Surf perch - Black croaker			DDT, PCBs

[1] California EPA defines sensitive populations as women who are pregnant, who may become pregnant, who are breast-feeding, and children under 6 years of age.

[2] California EPA defines a meal as 6 to 8 oz. (170 g to 227 g) of fish for a 154 lb (70 kg) individual. Meal size should be adjusted according to body weight (roughly 1 oz. of fish per 20 lbs of body weight).

[3] In addition to these advisories, California EPA has issued consumption warnings for the following ocean sites in Southern California that are not included within the scope of the California Toxics Rule: Newport Pier, Redondo Pier, Malibu Pier, Short Bank, Malibu/Point Dume, Point Vicente, Palos Verdes-Northwest, White's Point, Los Angeles/Long Beach Breakwater (ocean side), and Horseshoe Kelp. Detailed information on these advisories is available in the California Sport Fishing Regulations Handbook.

Source: U.S. EPA (1997).

EPA assessed baseline human health risks (cancer and systemic effects) based on reported contaminant levels in fish tissue samples collected from San Francisco Bay and freshwater fisheries throughout California. EPA then estimated the potential reduction in baseline risk levels that might result from implementation of the CTR. The approach used follows standard EPA methodology for estimating health risks as described in detail in U.S. EPA (1997).

8.1.1 Estimating the Exposed Population

EPA estimated the potentially exposed population for San Francisco Bay and for statewide freshwater resources based on information regarding recreational anglers. Consequently, this analysis does not include health risks to non-angler family members that consume fish obtained from recreational angling,[1] nor does it consider the benefits to individuals that consume commercially caught fish. EPA assumed that consumption of commercially caught fish from areas affected by implementation of the CTR would be small relative to the consumption of commercially caught fish from other locations. If there were consumption of substantial quantities of commercially caught fish from areas affected by the CTR, benefits would be underestimated.

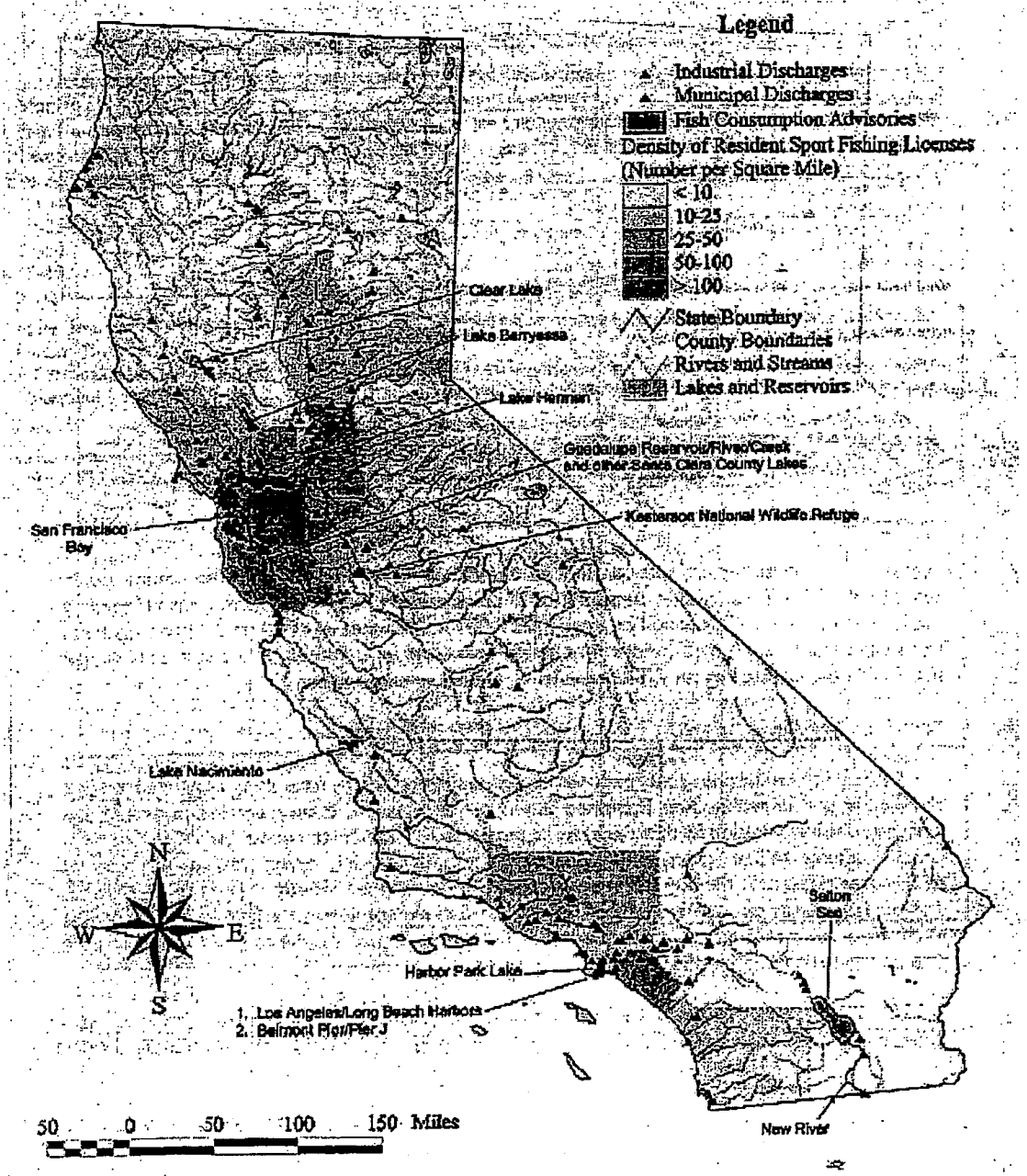
San Francisco Bay

EPA estimated the potentially exposed angler population for the case study based on the eight counties in the immediate San Francisco Bay area. A survey of fishing activity in central and northern California reported that there are approximately 332,000 saltwater anglers in the eight counties adjacent to San Francisco Bay, and the bay is the destination for approximately 50% of the trips taken near the bay (the area north of Stinson Beach to south of Davenport) (National Marine Fisheries Service, 1987). EPA assumed that one-half of the anglers fish exclusively in the bay and one-half fish exclusively at other Pacific Ocean sites. Applying this assumption, EPA estimated that there are 166,000 anglers using San Francisco Bay.

A portion of the estimated 166,000 saltwater anglers that use San Francisco Bay also may participate in freshwater angling. The 1996 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation (U.S. Department of Interior, Fish and Wildlife Service, and U.S. Department of Commerce, Bureau of the Census, 1998) indicates that 46% of the saltwater anglers (adults and children) in California fish exclusively in saltwater and 54% fish in both saltwater and freshwater. EPA assumed that anglers that split their time spend half of their time using each resource. Therefore, of the 166,000 anglers that use San Francisco Bay for saltwater angling, EPA estimated that 76,360 anglers fish exclusively in the Bay, and the other 89,640 split their time equally between the bay and freshwater resources. Thus, EPA estimated that approximately 121,000 full-time equivalent anglers use San Francisco Bay.

[1] Approximately 45% of anglers share the catch with family members (Save San Francisco Bay Association, 1995).

EXHIBIT 8-2. DENSITY OF FISHING LICENSES IN RELATION TO THE LOCATION OF POINT SOURCE DISCHARGERS IN CALIFORNIA



Because this estimate is based on data collected before the imposition of a FCA for San Francisco Bay, EPA adjusted the population down to account for behavioral responses of anglers to FCAs. Recent literature suggests that between 10% and 37% of anglers take fewer trips in response to FCAs (Fiore et al., 1989; Silverman 1990; Knuth et al., 1993; Knuth and Connelly, 1992; Vena, 1992; West et al., 1993). However, these anglers may not eliminate trip-taking. Therefore, EPA assumed that the FCA resulted in a 10% reduction in anglers using San Francisco Bay (This reduction was not likely to have been offset by population growth since resident fishing license sales in the eight counties adjacent to San Francisco Bay fell 22% between 1987 and 1994). EPA's adjusted estimate of full-time equivalent anglers for San Francisco Bay is 108,900.

Freshwater Resources

EPA used the 1996 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation (U.S. Department of Interior, Fish and Wildlife Service, and U.S. Department of Commerce, Bureau of the Census, 1998) and license sales reported by the California Department of Fish and Game for 1996 to estimate the number of freshwater anglers in California. The survey indicated that there were 2.7-million resident anglers in California, including adults and children. Sixty-three percent of the adult anglers fish exclusively in freshwater, 20% split their angling activity between fresh and saltwater, and the remaining 17% of anglers fish exclusively in saltwater. Assuming that children apportion their angling time in the same way as adults, EPA estimated that 1.7-million anglers fish exclusively in freshwater, and 551,000 split their time between fresh and saltwater resources. EPA assumed that anglers that split their time spend half of their time using each resource. Based on this information, EPA calculated that nearly 2-million full-time equivalent anglers use freshwater resources in California.

EPA reduced this estimate of freshwater anglers by the number of 1-day license sales in 1996 (329,730) to remove infrequent anglers from the estimate of potentially exposed anglers. This calculation uses the proportions for total angling time to apportion the number of 1-day licenses between salt and freshwater resources. Using this approach, EPA estimated a potentially exposed population of 1.7 million full-time equivalent anglers using freshwater resources in California.

8.1.2 Fish Consumption

EPA estimated fish consumption rates for both San Francisco Bay and freshwater anglers using the Santa Monica Bay Seafood Consumption Study (MBC Applied Environmental Services, 1994). For this study, the Santa Monica Bay Restoration project conducted a survey of 554 anglers fishing from beaches, piers, private boats, party boats, and charter boats to determine the level and nature of sport-caught fish consumption. This study reported a median consumption rate of 21.4 g/day and a 90th percentile consumption rate of 107.1 g/day for consuming anglers. Although these estimates were developed by interviewing only consuming anglers, EPA applied them to total anglers because they are supported by fish consumption rates for all anglers

(**Exhibit 8-3**). To the extent that the study does not accurately characterize the fish consumption of anglers using freshwater resources, it will lead to an overestimate or under estimate of risks.

Exhibit 8-3. Consumption Rates for Recreational Anglers

Study	Type of Fishery	Angler Population	Consumption Rate
U.S. EPA, 1989a	Sport-caught fish, nationally	All anglers	20 g/day
Puffer et al., 1981	Sport-caught fish from Los Angeles Bay, CA	Anglers who had creeled fish	37 g/day
MBC Applied Environmental Services, 1994	Sport-caught fish from Santa Monica Bay, CA	Anglers who consume fish	21 g/day

Source: U.S. EPA (1997).

8.1.3 Fish Tissue Contaminant Concentrations

EPA used available data (see U.S. EPA, 1997, Appendix F) to calculate the arithmetic mean of fish tissue contaminant concentrations for San Francisco Bay and for statewide freshwater resources. To determine the concentrations, EPA used one-half the MDL for samples in which contaminants were reported as non-detects (U.S. EPA, 1993).

San Francisco Bay

EPA obtained fish tissue contaminant levels from a 1994 study conducted by the San Francisco Regional Water Quality Control Board (SFRWQCB). The study included fish tissue samples from 16 sampling locations selected to provide a broad geographic coverage of the bay. The sampling survey (SFRWQCB, 1994) included fillets of white croaker, striped bass, perch, and shark. The fish tissue samples were prepared for chemical analysis according to the most common means of consumption (croaker and surf perch fillets with skin, and shark and striped bass without skin).

EPA relied on catch rates reported in the National Marine Fisheries Service Marine Recreational Fishing Statistics Survey of the Pacific Coast (1987, 1988, 1989, and 1993) (**Exhibit 8-4**) to develop species-weighted fish tissue contaminant concentrations for San Francisco Bay. The species consumption weighting factors are used to allocate the amount of fish consumed in proportion to anglers' exposure to individual fish species. EPA assumed that keep rates are comparable across the four species in the analysis. This approach was used for both San Francisco Bay and freshwater, but may not accurately reflect species-weighted fish tissue contaminant concentrations because the approach is based on the number of fish caught rather than the mass of edible fish tissue. In addition, fish tissue contaminant data for jacksmelt, a frequently caught species, was not available. However, the relatively small degree of variation in risks associated with consuming the four species that were included in the analysis suggests that the lack of data on mass consumed is unlikely to significantly overestimate or underestimate bay angler risks (U.S. EPA, 1997).

Exhibit 8-4. Species Weights for San Francisco Bay Fish Consumption

Species	Number of Fish Caught	Consumption Weighting Factors[3]
White croaker	532	43.1%
Surf perch[1]	432	35.0%
Striped bass	171	13.9%
Shark[2]	99	8.0%
Total	1,234	100.0%

[1] Includes shiner, walleye, pile, black, and rubberlip surf perch.
[2] Includes brown, smoothhound, and leopard shark.
[3] Represents the percentage of the total catch for each species. Keep rates are assumed to be comparable for the four species.
Source: National Marine Fisheries Service Marine Recreational Fishing Statistics Survey, Pacific Coast, 1987–1989 and 1993, as cited in U.S. EPA (1997).

Freshwater Resources

EPA obtained fish tissue contaminant concentration data from samples taken between 1988 and 1993 by the California Toxic Substances Monitoring Program. Despite the wide representation of freshwater bodies (224 sampling locations for metals and 170 for organics), this database may not be representative of all freshwater bodies. Sampling under this program has generally been targeted to water bodies with known or suspected water quality impairments. The sampling survey included samples of 32 different freshwater fish species, which EPA combined into five broad groups: trout, bass, catfish, panfish, and other. EPA developed species-weighted fish tissue contaminant concentrations from estimates of fishing activity and keep rates by species (**Exhibit 8-5**). The species consumption weighting factors are used to allocate the amount of fish consumed in proportion to anglers' exposures to individual fish species.

Exhibit 8-5. Species Weights for Freshwater Fish Consumption

Species	Annual Fishing Activity[1] (number of days)	Keep Rate[2]	Keep-Rate Weighted Days[3]	Consumption-Weighting Factors[4]
Trout	16,292	25%	2,660	28.0%
Bass	10,431	25%	1,541	16.2%
Catfish	3,972	80%	3,278	34.6%
Panfish	1,457	90%	1,679	17.7%
Other	5,455	25%	329	3.5%
Total	**28,987[5]**	—	**9,487**	**100.0%**

[1] Source: U.S. Department of Interior, Fish and Wildlife Service, and U.S. Department of Commerce, Bureau of the Census, 1998.
[2] Source: California Department of Fish and Game (1995). Keep rates for bass and trout were 20% to 25%. For purposes of this analysis EPA assumed that the keep rates for bass, trout, and "other" species were 25% (Dennis Lee, California Department of Fish and Game, personal communication, August 1995).
[3] Calculated by multiplying the annual fishing activity days for each species by the keep-rate for that species. The total keep-rate weighted days is a sum of the keep-rate weighted days for all species.
[4] Calculated by dividing the keep-rate weighted days for each species by the total keep-rate weighted days.
[5] Represents total number of fishing days per year. Does not equal the sum of individual species days because more than one species may have been caught during a single fishing day.

8.1.4 Baseline Risk Levels

EPA calculated exposure based on the assumption that each fish contained all contaminants listed at the concentrations shown in U.S. EPA (1997). **Exhibit 8-6** reports the assumed toxicity values for cancer and systemic effects. EPA used standard assumptions regarding length of residence, 70 years, and body weight, 70 kg (U.S. EPA, 1989b).

Exhibit 8-6. Toxicity Values and Contaminants Evaluated in Each Analysis

Contaminant	CSF[1] $(mg/kg\text{-}day)^{-1}$	RfD[1] (mg/kg-day)	San Francisco Bay	Freshwater Resources
Cadmium	NA	1.0×10^{-3}	☐	
Chlordane	1.3	6.0×10^{-5}	☐	☐
Copper	NA	3.7×10^{-2}	☐	☐
4,4-DDT	0.34	5.0×10^{-4}	☐	☐
Dieldrin	16.0	5.0×10^{-5}	☐	☐
Dioxin	1.50×10^{5}	NA	☐	
Endosulfan	NA	6.0×10^{-3}		☐
Endrin	NA	3.0×10^{-4}		☐
Fluoranthene	NA	4.0×10^{-2}	☐	
Fluorene	NA	4.0×10^{-2}	☐	
HCH-alpha	6.3	NA	☐	☐
HCH-beta	1.8	NA	☐	
HCH-gamma	1.3	3.0×10^{-4}	☐	☐
Heptachlor Epoxide	9.1	1.3×10^{-5}	☐	
Heptachlor	4.5	5.0×10^{-4}	☐	
Hexachlorobenzene	1.6	8.0×10^{-4}	☐	☐
Mercury	NA	1.0×10^{-4}	☐	☐
Nickel	NA	2.0×10^{-2}		☐
PCBs[2]	2.0	2.0×10^{-5}	☐	☐
Pyrene	NA	3.0×10^{-2}	☐	
Selenium	NA	5.0×10^{-3}		☐
Silver	NA	5.0×10^{-3}	☐	
Toxaphene	1.1	NA		☐
Zinc	NA	3.0×10^{-1}	☐	☐

[1] CSF = cancer slope factor; RfD = reference dose. Toxicity values obtained from U.S. EPA's Integrated Risk Information System (4th Quarter, 1996), except for the HCH-gamma and dioxin CSFs and the copper RfD, which were obtained from U.S. EPA's Health Effects Assessment Summary Table, 1994.

[2] The CSF is based on EPA's revised October 1,1996, guidance for assessment of carcinogenic human health risks associated with PCB exposure.

NA = Not applicable

Source: U.S. EPA (1997).

San Francisco Bay

Exhibit 8-7 presents estimates of baseline cancer risks for San Francisco Bay anglers. EPA estimated that the individual excess lifetime cancer risk for anglers consuming a mixed species diet at an average consumption rate is 1.8×10^{-4} and statistical excess cancer cases per year at baseline are less than 1. (Potential benefits of the CTR are calculated for the average consumption rate.) However, for anglers consuming at the 90th percentile consumption rate, the individual excess lifetime cancer risk is 9.2×10^{-4}. These risks are dominated by PCBs and dioxin, which contribute 49% and 41%, respectively, to the cancer risk for an average angler.[2]

Exhibit 8-7. Baseline Cancer Risks for Recreational Anglers Consuming San Francisco Bay Fish

Contaminant	Individual Excess Lifetime Cancer Risk		Population Cancer Risk[1] (excess cases per year)	Relative Contribution to Risk
	Average Consumption (21.4 g/day)	90th Percentile Consumption (107.1 g/day)		
PCBs[2]	9.0×10^{-5}	4.5×10^{-4}	<1	49.0%
Dioxin	7.6×10^{-5}	3.8×10^{-4}	<1	41.2%
Dieldrin	7.8×10^{-6}	3.9×10^{-5}	0	4.2%
4,4-DDT	4.9×10^{-6}	2.4×10^{-5}	0	2.6%
Chlordane	3.9×10^{-6}	2.0×10^{-5}	0	2.1%
HCH-alpha	4.8×10^{-7}	2.4×10^{-6}	0	0.3%
Heptachlor Epoxide	3.8×10^{-7}	1.9×10^{-6}	0	0.2%
HCH-beta	1.7×10^{-7}	8.5×10^{-7}	0	0.1%
Heptachlor	1.6×10^{-7}	7.7×10^{-7}	0	0.1%
HCH-gamma	9.2×10^{-8}	4.6×10^{-7}	0	<0.1%
Hexachlorobenzene	8.1×10^{-8}	4.1×10^{-7}	0	<0.1%
Total	$\mathbf{1.8 \times 10^{-4}}$	$\mathbf{9.2 \times 10^{-4}}$	**<1**	**100.0%**

[1] Based on average fish consumption (21.4 g/day).
[2] Risk is based on an estimated concentration of PCBs in fish tissue that appears to be calculated by summing Aroclor congeners for 1248, 1254, and 1260. This may result in overstating baseline risks.
Source: U.S. EPA (1997).

Systemic (noncancer) risks are assessed by means of a hazard quotient (HQ) for each contaminant. The HQ is calculated by dividing the expected exposure level (dose) by the oral reference dose (RfD), where the oral RfD indicates the level of chronic exposure below which no adverse health effects are expected. Therefore, a HQ of 1.0 or greater implies that chronic

[2] Risk based on full-time equivalent anglers. Individual baseline risks may be lower by a factor of two for anglers that spend a portion of their time fishing in less-contaminated waters such as anglers that split their fishing activity between saltwater and freshwater, as discussed in Section 8.1.1.

chemical exposures exceed EPA-established "thresholds" of toxicity, and is indicative of potential for adverse health effects. The potential for detrimental health effects increases as the HQ increases above 1.0.

Exhibit 8-8 presents estimated baseline systemic risks for San Francisco Bay anglers. EPA estimated that the HQ for PCBs is 2.3. For anglers with high consumption rates (90th percentile), EPA estimated that the HQs for PCBs, mercury, and dioxin are 11.3, 3.8, and 2.5, respectively.[3]

Exhibit 8-8. Baseline Systemic Risks for Recreational Anglers Consuming San Francisco Bay Fish

Contaminant	Hazard Quotient[1]	
	Average Consumption (21.4 g/day)	90th Percentile Consumption (107.1 g/day)
PCBs	**2.26**	**11.31**
Mercury	0.75	**3.77**
Dioxin	0.51	**2.54**
Chlordane	0.05	0.25
4,4-DDT	0.03	0.14
Dieldrin	0.01	0.05
Zinc	0.01	0.04
Heptachlor Epoxide	<0.01	0.02
Copper	<0.01	0.01
Cadmium	<0.01	<0.01
HCH-gamma	<0.01	<0.01
Silver	<0.01	<0.01
Heptachlor	<0.01	<0.01
Hexachlorobenzene	<0.01	<0.01
Fluoranthene	<0.01	<0.01
Pyrene	<0.01	<0.01
Fluorene	<0.01	<0.01

[1] Hazard quotients above one shown in bold.
Source: U.S. EPA (1997).

Freshwater Resources

Exhibit 8-9 presents estimated baseline cancer risks for California freshwater anglers. EPA estimated that the individual excess lifetime cancer risk at baseline for anglers consuming a mixed species diet at an average consumption rate is 1.5×10^{-4} and there are less than four baseline excess statistical cancer cases per year. For anglers consuming a mixed species fish diet at the 90th percentile consumption rate, EPA estimated that the individual excess lifetime cancer

[3] Risk based on full-time equivalent anglers. The baseline HQ for all contaminants except mercury are estimated to be less than one for anglers that spend a portion of their time fishing in less contaminated waters.

risk is 7.6×10^{-04}. These risks are dominated by PCBs, toxaphene, 4,4-DDT, and dieldrin, which contribute 37%, 21%, 17%, and 16%, respectively, of the cancer risk for an average angler.

Exhibit 8-9. Baseline Cancer Risks for Recreational Anglers Consuming Freshwater Fish in California

Contaminant	Individual Excess Lifetime Cancer Risk		Population Cancer Risk[1] (excess cases per year)	Relative Contribution to Risk
	Average Consumption (21.4 g/day)	90th Percentile Consumption (107.1 g/day)		
PCBs	5.6×10^{-05}	2.8×10^{-04}	2	37.0%
Toxaphene	3.2×10^{-05}	1.6×10^{-04}	1	21.2%
4,4-DDT	2.5×10^{-05}	1.3×10^{-04}	1	16.6%
Dieldrin	2.4×10^{-05}	1.2×10^{-04}	1	16.0%
Chlordane	1.1×10^{-05}	5.3×10^{-05}	<1	7.0%
HCH-alpha	2.0×10^{-06}	1.0×10^{-05}	<1	1.3%
Hexachlorobenzene	1.0×10^{-06}	5.1×10^{-06}	<1	0.7%
HCH-gamma	4.6×10^{-07}	2.3×10^{-06}	<1	0.3%
Total	1.5×10^{-04}	7.6×10^{-04}	5	100.0%

[1] Based on average fish consumption (21.4 g/day).
Source: U.S. EPA (1997).

Exhibit 8-10 presents the potential baseline systemic risks for California freshwater anglers. EPA estimated that the baseline HQ for PCBs is 1.4. For anglers with high consumption rates (90th percentile), EPA estimated that the baseline HQs for PCBs and mercury are 7.0 and 3.1, respectively.

8.1.5 Potential Risk Reductions Attributable to the Rule

To estimate the potential risk reductions attributable to the CTR, EPA assumed that fish tissue contaminant concentrations would be reduced by the expected reduction in loadings multiplied by the assumed contribution of point sources to total loadings developed in Chapter 7 (**Exhibit 8-11**). As shown in Chapter 4, EPA developed two scenarios of potential baseline pollutant loadings and reductions in loadings attributable to the rule. These scenarios reflect the uncertainty underlying the analysis of potential costs to point source dischargers that results from limited data on the presence of toxic pollutants in the effluents below detectable levels.

Exhibit 8-10. Baseline Systemic Risks for Recreational Anglers Consuming Freshwater Fish in California

Contaminant	Hazard Quotient[1]	
	Average Consumption (21.4 g/day)	90th Percentile Consumption (107.1 g/day)
PCBs	**1.40**	**7.02**
Mercury	0.62	**3.12**
4,4-DDT	0.15	0.74
Chlordane	0.14	0.68
Dieldrin	0.03	0.15
Selenium	0.02	0.12
Endrin	0.01	0.04
Endosulfan	<0.01	0.02
Zinc	<0.01	0.02
Copper	<0.01	0.01
HCH-gamma	<0.01	0.01
Nickel	<0.01	0.01
Hexachlorobenzene	<0.01	<0.01

[1] Hazard quotients above one shown in bold.
Source: U.S. EPA (1997).

In the first scenario (the low cost scenario), EPA estimated baseline pollutant loadings of 1.8 million pounds per year and a reduction of 20.6% of this baseline resulting from the CTR. On a toxicity-weighted basis, this represents baseline loadings of 2.2 million pounds-equivalent per year and a reduction of 49.6%. Under the second scenario (the high cost scenario), EPA estimated baseline pollutant loadings of 153.9 million pounds per year and a reduction of 28.4% from this baseline resulting from the CTR. On a toxicity-weighted basis, this represents baseline loadings of 18.5 million pounds-equivalent per year and a reduction of 14.7%.

The two scenarios reflect use of different assumptions regarding whether pollutants are present in the effluent of point source dischargers with the high cost scenario using permit limits to establish the presence of pollutants (and not actual effluent monitoring data). Thus, the high cost scenario establishes a larger baseline loading of toxic pollutants from point sources compared to the low cost scenario. The high cost scenario also indicates a smaller percentage reduction as a result of the CTR although this increment is larger in absolute terms compared to that resulting under the low cost scenario.

Because of the uncertainty in the analysis of baseline pollutant loadings, EPA used the midpoint between the reductions estimated under the low and high cost scenarios for estimating potential benefits. For human health risk reduction benefits, this is implemented simply as the midpoint between the low and high cost scenario results for each pollutant analyzed (the percentage reductions are the same on an unweighted or toxicity-weighted basis).

Exhibit 8-11. Estimated Reduction in Fish Tissue Contaminant Concentrations Due to Implementation of the CTR

Contaminant	Statewide Reductions in Loadings[1] (%)	Reduction in Fish Tissue Concentration (%)	
		San Francisco Bay[2]	Freshwater Resources[3]
Cadmium	0.2	0	ne
Chlordane	0	0	0
Copper	14.9	0.1 - 1.5	0.4
4,4-DDT	0	0	0
Dieldrin	0	0	0
Dioxin	0	0	ne
Endosulfan	0	ne	0
Endrin	0	ne	0
Fluoranthene	0	0	ne
Fluorene	0	0	ne
HCH-alpha	0	0	0
HCH-beta	0	0	ne
HCH-gamma	25.2	0.3 - 2.5	0.8
Heptachlor Epoxide	0	0	ne
Heptachlor	0	0	ne
Hexachlorobenzene	48.1	0.5 - 4.8	1.4
Mercury	70.3	0.7 - 7.0	2.1
Nickel	9.2	ne	0.3
PCBs	25.9	0.3 - 2.6	0.8
Selenium	0	ne	0
Silver	38.5	0.4 - 3.9	ne
Toxaphene	1.0	ne	0
Zinc	2.4	0 - 0.2	0.1

[1] Represents the midpoint of the low and high cost scenario results.
[2] Calculated by multiplying the percent reduction in point source loading by the estimated point source contribution to total loadings (1%-10%)
[3] Calculated by multiplying the percent reduction in point source loading by the estimated point source contribution to total loadings (3%).
ne= Not evaluated

Exhibits 8-12 and **8-13** present the potential reductions in cancer risks for recreational anglers. EPA estimated reductions in statistical cancer cases for anglers with average consumption rates. Using an estimated value of a statistical life of $2.5 million to $9.0 million (American Lung Association, 1995) updated to first quarter 1998 dollars[4] and assuming all cancers are fatal,

[4] 1995 dollars were updated to first quarter 1998 dollars using the Consumer Price Index (CPI) as reported in the U.S. Department of Labor (U.S. Bureau of Labor Statistics, 1998). Note that there is currently a debate regarding the accuracy of the CPI.

potential human health benefits of reduced cancer cases in recreational anglers range from $0.10 million to $4.20 million per year[5].

Exhibit 8-12. Potential Effect of Implementation of the CTR on Cancer Risks for Recreational Anglers

Contaminant	Baseline Individual Excess Lifetime Cancer Risk		Post-CTR Individual Excess Lifetime Cancer Risk[1]	
	Average Consumption (21.4 g/day)	90th Percentile Consumption (107.1 g/day)	Average Consumption (21.4 g/day)	90th Percentile Consumption (107.1 g/day)
San Francisco Bay				
Total[2]	1.84×10^{-4}	9.20×10^{-4}	1.54×10^{-4} – 1.60×10^{-4}	7.69×10^{-4} – 7.99×10^{-4}
Freshwater Resources				
Total[3]	1.51×10^{-4}	7.60×10^{-4}	1.34×10^{-4}	6.72×10^{-4}

[1] Range based on estimate of reductions in fish tissue concentration contamination (based on projected point source load reductions and the contribution of point sources to total loading).
[2] Total for 11 contaminants listed in Exhibit 8-7.
[3] Total for 8 contaminants listed in Exhibit 8-9.

Exhibit 8-13. Potential Human Health Benefits of Reducing Cancer After Implementation of the CTR to Recreational Anglers[1]

Water Body	Annual Reduction in Cancer Cases	Annual Monetized Benefits (millions of 1998 dollars)[1,2]
San Francisco Bay	0.04 - 0.05	$0.10 - $0.45
Freshwater Resources	0.44	$1.17 - $4.20

[1] Based on an average consumption rate (21.4 g/day) and a value of a statistical life of $2.5 million to $9.0 million (American Lung Association, 1995). Values based on the estimates of reductions in fish tissue concentration contamination.
[2] Estimates are adjusted from 1995 dollars to first quarter 1998 dollars using the Consumer Price Index (CPI) as reported in the U.S. Department of Labor (U.S. Bureau of Labor Statistics, 1998). Note that there is currently a debate regarding the accuracy of the CPI.

Exhibit 8-14 presents the potential effect of the CTR on systemic risks for recreational anglers, indicating potential reductions in the hazard quotients for PCBs and mercury. For PCBs, EPA expects the hazard quotient associated with the average consumption rate to be reduced from 2.26 to a range of 1.51-1.66 for San Francisco Bay anglers and from 1.40 to 1.01 for freshwater anglers. However, for the high consumption rate (90th percentile), the HQ for PCBs is expected to be reduced from 11.31 to a range of 7.54-8.29 for San Francisco Bay anglers and from 7.02 to 5.04 for freshwater anglers.

EPA estimated that the HQ for mercury will be reduced for both the average and 90th percentile consumption rates, however baseline levels exceed 1.0 for high consumers only. For high fish consumers (90th percentile), EPA expects the HQ for mercury to be reduced from 3.77 to a range of 1.01-1.11 for San Francisco Bay anglers and from 3.12 to 0.90 for freshwater anglers.

[5] Based on the following calculation: (estimated value of a life) x (CPI factor) x (reduction in cancer cases); e.g., $2.5 million x 1.062 x 0.04 = $0.1 million.

Exhibit 8-14. Potential Effect of Implementation of the CTR on Systemic Risks for Recreational Anglers

Contaminant	Baseline Hazard Quotient[1]		Post-CTR Hazard Quotient[1,2]	
	Average Consumption (21.4 g/day)	90th Percentile Consumption (107.1 g/day)	Average Consumption (21.4 g/day)	90th Percentile Consumption (107.1 g/day)
San Francisco Bay				
PCBs	**2.26**	**11.31**	**1.51 - 1.66**	**7.54 - 8.29**
Mercury	0.75	**3.77**	0.20 - 0.22	**1.01 - 1.11**
Dioxin	0.51	**2.54**	0.51 - 0.51	**2.54 - 2.54**
Freshwater Resources				
PCBs	**1.40**	**7.02**	**1.01**	**5.04**
Mercury	0.62	**3.12**	0.18	0.90

[1] Hazard quotients above one shown in bold.
[2] Range based on estimates of reductions in fish tissue concentration contamination.

8.1.6 Uncertainties and Limitations

As described in U.S. EPA (1997), there are numerous uncertainties associated with the assessment of potential human health risks including the following:

Risks were based on contaminant concentrations found in fish fillets or fish prepared by the most common method for the species (croaker and surf perch fillets with skin, and shark and striped bass without skin). Anglers that consume other body parts or untrimmed fillets (including the skin) face higher risks. The Santa Monica Bay Seafood Consumption Study (MBC Applied Environmental Services, 1994) reported that one-third of all anglers eat fish whole, but gutted, including nearly 50% of Asians and 44% of Hispanics.

Risks were based on tissue contaminant levels measured in raw fish fillets. One study (OEHHA, 1991) found that 4,4-DDT concentrations may decrease by 20% to 80% after cooking (U.S. EPA, 1997).

The assessment does not include potential health risks associated with inorganic arsenic. Arsenic in edible fish tissue is, in almost all cases, present as arsenic-containing organic compounds that are not considered a threat to human health. However, where small amounts of inorganic arsenic are present in edible fish tissue, the analysis will understate potential risks.

Average fish tissue concentrations used in the assessment are calculated using one-half of the MDL for all contaminants reported at below the analytical detection level (but found present in other fish tissue samples taken from the same site).

The risk assessment did not include a separate analysis for low-income anglers. MBC Applied Environmental Services (1994) reported a median fish consumption of 32.1 g/day for anglers with incomes below $5,000, compared to 21.4 g/day for all anglers. Results at the 90th percentile consumption rate included in this analysis covers people consuming higher than average consumption.

Risk reduction based on extrapolation of loadings reduction from sample facilities may overstate or understate actual loadings reduction and actual risk reduction.

The assessment does not account for potential synergistic effects of mixtures of pollutants in fish tissue.

8.2 RECREATIONAL ANGLING BENEFITS

The above section described the potential human health benefits that may result from implementation of the CTR. Concerns regarding adverse health effects from eating contaminated fish also may reduce the value of the recreational fishery because the ability to consume fish may be an important attribute of the overall fishing experience (Knuth and Connelly, 1992; Vena, 1992; FIMS and FAA, 1993; West et al., 1993). This reduction in value may occur because fewer fishing trips are taken or because the value of a trip is reduced. In addition, as described in Chapter 6, reduced toxic contamination may increase stability, resilience, and overall health of numerous ecosystems, which may increase catch rates as well as angling effort in California. Thus, the potential recreational benefits of the CTR may include an increase in the value of fishing experiences and an increase in participation.

This section provides estimates of these two components of recreational angling value. Because the analysis is conducted at the statewide level and does not consider numerous site-specific characteristics that will affect the level of benefits from the rule, the results are only intended to provide a rough approximation of the potential magnitude of recreational benefits. A case study approach would be required to more accurately characterize the anticipated angling benefits at any specific water body in California.

8.2.1 Value of an Improved Fishing Experience

As described previously, toxic contamination is responsible for 12 fish consumption advisories currently in place throughout the state, including advisories for 4,4-DDT, chlordane, dioxin, mercury, PCBs, and selenium (see Exhibit 8-1). These advisories, and knowledge of toxic contamination in other water bodies, may affect anglers' enjoyment of the fishing experience. EPA estimated reductions in mercury and other toxic contaminants in California surface waters as a result of implementation of the CTR. Thus, the rule may reduce concentrations of toxics in fish tissue, increasing value to recreational anglers.

EPA was unable to identify any studies regarding the value to California anglers of reducing toxic contamination of surface waters. However, a 1992 study of the Wisconsin Great Lakes

open water sport fishing (Lyke, 1993) does reveal the significance of the contamination problem to the anglers. Lyke estimated the value of the Great Lakes trout and salmon fishing to anglers if it were "completely free of contaminants that may threaten human health." Lyke's estimates indicate benefits of 11% to 31% of the value of the fishery.

Lyke's work estimated the value of reducing toxic contamination in a popular boat fishery that has experienced widespread and highly publicized historical contamination and fish consumption advisories. Thus, the study results may be less applicable for many California anglers because, for example, the fish consumption advisory for San Francisco Bay was issued in 1994 and the fishing experience at many freshwater rivers and streams may differ significantly from Great Lakes trout and salmon angling. However, rather than leave an important category of potential benefits unmonetized, EPA transferred the results from the Lyke study to estimate potential recreational angling benefits of the CTR in California. EPA also considered what the research might indicate about potential benefits for all California waters affected by toxics, not just those waters under fish consumption advisories.[6]

To transfer the Lyke results, EPA first estimated the number of fishing days in California that occur in toxic-impaired waters, distinguishing between water body type (e.g., freshwater river versus saltwater). Next, EPA multiplied the number of fishing days by an average consumer surplus for the different modes of fishing to obtain a baseline value of the fishery. EPA then multiplied by Lyke's estimate of 11% to 31% to obtain the value of a "contaminant-free" fishery. Finally, EPA multiplied by the expected reduction in loadings and the assumed contribution of point sources to total loadings (developed in Chapter 7) to obtain the portion of these benefits that may be potentially attributable to point source controls. These steps are described below.

Estimating Toxic-Impaired Fishing Days

EPA developed estimates of the number of fishing days in freshwater and saltwater sources in California based on information from several sources (National Marine Fisheries Service, 1987–1989 and 1993, Huppert, 1989; U.S. Fish and Wildlife Service, 1993; EPA, 1997). EPA then analyzed the extent of toxic impairment of California waters based primarily on the State of California's WQA database (Water Resources Control Board, 1994) as described in U.S. EPA (1997) and used this information to calculate "toxic-impaired" fishing days. This approach assumes that anglers have not substituted away from contaminated waters.

It also should be noted that EPA defined "impaired" waters as those monitored and rated by the State of California as having medium or poor quality for at least one toxic pollutant or group of

[6] Transferring the Lyke (1993) research to all California waters affected by toxics, but not posing human health risk as indicated by fish consumption advisories, may overstate potential benefits.

toxic pollutants.[7] The State of California has monitored 9% of river and stream miles; 54% of lake and reservoir acreage; and an unknown percentage of bays, estuaries, and saline lakes (U.S. EPA, 1997). Of these monitored waters, the state found that 19% of river and stream miles, 19% of lake and reservoir acreage, 69% of San Francisco Bay, 51% of other California bays, 47% of estuaries, and 69% of saline lakes are "impaired" (U.S. EPA, 1997). EPA assumed for this analysis, maybe conservatively, that California has monitored 50% of bays, estuaries, and saline lakes and then that 50% of unmonitored waters were impaired similarly to monitored waters.[8] To the extent that a substantially greater proportion of waters that have not been monitored are impaired, benefits will be underestimated.

As shown in **Exhibit 8-15**, multiplying the estimated number of fishing days by the percent of monitored waters that are impaired yields estimates of the number of toxic-affected fishing days. EPA estimated a total of 6.4-million fishing days in toxic-impaired waters in California, of which 3.7 million are associated with freshwater fishing and 2.7 million are associated with saltwater fishing.

Exhibit 8-15. Baseline Fishing Days Occurring in Toxic-Impaired Waters[1] in California

	Fishing Days per Year[2]	Percent of Assessed Waters Toxic-Impaired[1,2]	Toxic-Affected Fishing Days[3]
Freshwater Fishing			
Lakes, reservoirs, and ponds	17,826,000	15%	2,673,900
Rivers and streams	10,304,000	10%	1,030,400
Subtotal	28,232,000	—	3,704,300
Saltwater Fishing			
Bays			
San Francisco Bay	750,200[3]	69%	571,638
Other California bays	2,745,800[3]	38%	1,043,404
Estuaries	2,097,600[3]	35%	734,160
Saline lakes	699,200[3]	52%	363,584
Subtotal	6,292,800	—	2,658,786
Total	**34,524,800**	—	**6,363,086**

[1] "Impaired" waters are defined as those assessed and rated by the State of California as medium or poor quality for at least one toxic pollutant or group of pollutants. The ratings of these waters corresponds to U.S. EPA's not fully and partially supporting categories.
[2] Based on a total of 6,992,000 total saltwater fishing days. Assumes 50% in bays (e.g., pier fishing), 30% on estuaries, and 10% on saline lakes. Remainder is open sea fishing not addressed by the rule. Estimated fishing days for San Francisco Bay based on estimated number of anglers from health risk analysis (121,000) multiplied by the average days per angler (6.2) from Huppert (1989).
[3] Calculation of toxic-affected fishing days may not be duplicated exactly due to rounding.
Source: Based on U.S. FWS (1993) and U.S. EPA (1997)

Baseline Fishery Value

[7] The California WQA database categories of medium and poor translate to the U.S. EPA categories of not fully supporting and partially supporting. The medium and less severely impaired waters were grouped together into the partially supporting category. The remaining waters classified as poor were placed in the not fully supporting category.

[8] For example, for river and stream miles, the calculation is (19% × 9%) + (19% × 91% × 50%) = 10%.

To estimate the baseline value of the estimated 6.4-million fishing days (in toxic-impaired waters), EPA reviewed the literature for recreational fishing studies that may be appropriate for valuing fishing in California. These studies, listed in **Exhibit 8-16**, suggest consumer surplus associated with freshwater fishing in the range of $25 to $35 per day. This range is consistent with that found by Walsh et al. (1988) in a national review of studies for freshwater fishing. For saltwater fishing, the study results vary more widely, and depend on the mode of fishing (e.g., charter boat, private boat, or shore fishing) and species sought. However, most of the results fall in the range of $50 to $100. This range is also consistent with the average value reported by Walsh et al. for saltwater fishing ($95 per day).

Exhibit 8-16. Studies Revealing Estimates of Consumer Surplus per Fishing Day

Study	Location/Species	Consumer Surplus Estimate ($1996)
Freshwater		
Roach, 1996	American, Feather, Sacramento, and Yuba rivers	$15.24–$36.89; preferred model specification yields $31.17–$36.37 estimate
Hay, 1988	California bass anglers	$31.17
Loomis and Cooper, 1990	Trout in Feather River	$26.69
Walsh, 1988	Average of national studies	$30.85–$40.08
Saltwater		
NOAA, 1986	Marine fishing in Southern California	Charter: $29.74–$66.24 Private: $82.46–$100.02 Shore/pier: $44.23–$84.01
Huppert, 1989	San Francisco Bay, salmon and striped bass	$70.88–$357.36
Walsh, 1988	Average of national studies	$94.89

The ranges of consumer surplus chosen by EPA, $25 to $35 for freshwater and $50 to $100 for saltwater, were adjusted from 1996 to 1998 first quarter dollars using the CPI as reported in the U.S. Department of Labor (U.S. Bureau of Labor Statistics, 1998)[9]. In 1998 dollars, the ranges are $26 to $37 for freshwater and $53 to $105 for saltwater.[10]

Multiplying toxic-impaired fishing days by the relevant range of consumer surplus per day results in estimates of the baseline value of the fishery (See **Exhibit 8-17**). EPA estimated that the baseline value of these waters in California is currently between $237.2 million and $416.2 million per year.

[9] Note that there is currently a debate regarding the accuracy of the CPI.

[10] Based on the following calculations: ($25 × 1.05 = $26); ($35 × 1.05 = $37); ($50 × 1.05 = 53); ($100 × 1.05 = $105).

Exhibit 8-17. Baseline Value of Fishing Days Occurring in Toxic-Impaired Waters in California (1998 First Quarter Dollars)

	Toxic-Affected Fishing Days	Consumer Surplus per Day	Baseline Value ($ millions)
Freshwater Fishing			
Lakes, reservoirs and ponds	2,673,900	$26-$37	$69.5-$98.9
Rivers and streams	1,030,400	$26-$37	$26.8-$38.1
Subtotal	3,704,300		$96.3-$137.1
Saltwater Fishing			
Bays			
San Francisco Bay	517,638	$53-$105	$27.4-$54.4
Other California bays	1,043,404	$53-$105	$55.3-$109.6
Estuaries	734,160	$53-$105	$38.9-$77.1
Saline lakes	363,584	$53-$105	$19.3-$38.2
Subtotal	2,658,786		$140.9-$279.2
Total	**6,363,086**		**$237.2-$416.2**

Potential Benefits Attributable to the CTR

Multiplying the baseline fishery value ($237.2 million to $416.2 million per year) by the increase in value estimated by Lyke (11% to 31%) results in potential benefits of achieving a "toxic-free" fishery of $26.1 million to $129.0 million per year. The next step is to determine the portion of these benefits that might reasonably be attributable to the CTR. EPA believes that the toxicity-weighted results may be the most meaningful for the estimation of benefits although the unweighted results are also important because the pollutants with relatively lower toxic weights can cause problems in a specific waterbody. The toxic-weighted results indicate a 49.6% reduction in pollutant loadings under the low scenario and a 14.7% reduction under the high scenario. As discussed previously, the two scenarios reflect the uncertainties associated with estimation of point source loadings of toxic pollutants. EPA believes that the midpoint between the two scenarios is a reasonable estimate of potential benefits. The midpoint of this range (32.2%) is close to the unweighted reduction in pollutant loadings under the high scenario (28%). Therefore, EPA estimated potential recreational fishing benefits based on a 32.2% reduction in pollutant loadings and assuming that this reduction is indicative of the reduction of impairment from toxics that will be experienced under the CTR.

Thus, EPA multiplied the total potential benefits by 32.2% and then by the percent of total toxic loadings attributable to point sources in California waters, as presented in Exhibit 7-4. As

presented in **Exhibit 8-18**, the approach results in potential benefits attributable to the CTR of between $1.53 million per year and $12.99 million per year.

Exhibit 8-18. Potential Recreational Angling Benefits from a "Toxic-Free" Fishery Attributable to Implementation of the CTR (Millions of 1998 First Quater Dollars/Year)

	Baseline Fishery Value	Value of "Toxic-Free" Fishery	Reduction in Toxic-Weighted Loadings Due to the CTR	Assumed Point Source Contribution to Total Loadings	Potential Benefits Attributable to the CTR
Freshwater					
Lakes, reservoirs and ponds	$69.5-$98.9	$7.6-$30.7	32.2%	3%	$0.07 - $0.30
Rivers and streams	$26.8-$38.1	$2.9-$11.8	32.2%	3%	$0.03 - $0.11
Saltwater					
San Francisco Bay	$27.4-$54.4	$3.0-$16.8	32.2%	1%–10%	$0.01 - $0.54
Other bays	$55.3-$109.6	$6.1-$34.0	32.2%	42%–64%	$0.82 - $7.00
Estuaries	$38.9-$77.1	$4.3-$23.9	32.2%	42%–64%	$0.58 - $4.92
Saline lakes	$19.3-$38.2	$2.1-$11.8	32.2%	3%	$0.02 - $0.11
Total	**$237.2-$416.2**	**$26.1-$129.0**	—	—	**$1.53 - $12.99**

8.2.2 Value of Increased Participation

In addition to increasing the value of existing angling days, reduced toxic loadings also may increase participation levels. Toxic contamination may discourage recreational fishing participation because of concern that consumption is unsafe. Similarly, knowledge of toxic contamination alone, regardless of consumption concerns, may reduce anglers' participation at a given site. Improving water quality to achieve toxic water quality criteria may restore this lost participation.

Estimating lost participation, however, is difficult for two reasons. First, little is known about how decreases in participation vary given different levels of contamination. When toxic contamination is not publicized or a fish consumption advisory is not posted, toxic-impaired waters may experience no decrease in fishing since anglers may not change their fishing patterns without knowledge of the contamination. Second, the availability of unaffected substitute sites may simply result in a shift in participation from one site to another. It is difficult, however, to account for substitute sites when estimating benefits for such a large area since the availability of substitute sites may vary greatly depending on geographical location and the economic status of the affected anglers. Participation in unaffected waters may actually decrease if participation shifts to the waters improved by implementation of the CTR. Decreased congestion at unimpaired sites will increase an angler's fishing value, however. EPA was not able to account for the effects of reduced congestion or substitute sites when estimating benefits of increased fishing participation.

Since toxic contamination in California occurs statewide, negative perceptions of California's water quality may also exist statewide. A statewide decrease in the level of toxic contamination on all water bodies may improve perceptions of water quality and thus have a positive impact on participation. In addition, as described in Chapter 6, reduced toxic contamination may increase the stability, resilience, and overall health of numerous ecosystems, resulting in higher catch rates. As a result, even if good substitute sites exist for toxic-affected sites, a minimal increase in participation may result from implementation of the CTR.

A limited number of studies have estimated reductions in participation due to water quality degradation. For example, a survey of New York State anglers (Connelly et al., 1988) found that anglers aware of fish consumption advisories took 17% fewer fishing trips. In a study of lake recreation in Wisconsin, Caulkins et al. (1986) estimated that the number of recreationalists using the site would increase by 12% to 16% as a result of general water quality improvements. Other evidence regarding the behavioral response of anglers to fish consumption advisories suggests that between 10% and 37% of anglers take fewer trips in response to fish consumption advisories (Fiore et al., 1989; Silverman, 1990; Knuth and Connelly, 1992; Knuth et al., 1993; West et al., 1993). All of these studies estimate the percentage of *people* that would take fewer trips, not the percentage decrease in angling days. However, these anglers are not expected to eliminate trip-taking, and, as a result, a 5% to 10% reduction in trips may be reasonably assumed. Because public knowledge of toxic contamination varies across water bodies, EPA conservatively assumed a 5% increase in angler participation in estimating the benefits from increased angling participation for all waters except San Francisco Bay. Since a fish consumption advisory was issued for the Bay in 1994, EPA assumed a 10% increase in angler participation for the Bay.

Potential Benefits Attributable to the CTR

EPA estimated the value of increased angling participation in a similar fashion as it estimated the value of improved fishing experiences. EPA multiplied the number of toxic-affected fishing days by 5% (10% for San Francisco Bay) to estimate the expected increase in participation and valued these days using the estimated consumer surplus values presented in Section 8.2.1. To estimate the portion of these benefits attributable to implementation of the CTR, EPA multiplied by the midpoint of expected reduction in loadings (32.2%) and the attribution assumptions developed in Chapter 7. As shown in **Exhibit 8-19**, potential benefits due to increased participation resulting from the CTR range from $0.7 million per year to $2.2 million per year (first quarter 1998 dollars).

Exhibit 8-19. Potential Benefits from Increased Angling Participation (Millions of 1998 First Quarter Dollars/Year)

	Baseline Toxic-Impaired Fishing Days	Additional Fishing Days (5% of Baseline)[1]	Consumer Surplus (per day)	Value of Additional Days	Reduction in Toxic-Weighted Loadings due to the CTR	Assumed Point Source Contribution to Total Loadings	Potential Benefits Attributable to Implementation of the CTR[2]
Freshwater							
Lakes, reservoirs and ponds	2,673,900	133,695	$26–$37	$3.5-$4.9	32.2%	3%	$0.03 - $0.05
Rivers and streams	1,030,400	51,520	$26–$37	$1.3-$1.9	32.2%	3%	$0.01 - $0.02
Subtotal	3,704,300	185,215	$26–$37	$4.8-$6.9	—	—	$0.04 - $0.07
Saltwater							
San Francisco Bay	517,638	51,764	$53–$105	$2.7-$5.4	32.2%	1%–10%	$0.01 - $0.18
Other bays	1,043,404	52,170	$53–$105	$2.8-$5.5	32.2%	42%–64%	$0.37 - $1.13
Estuaries	734,160	36,708	$53–$105	$1.9-$3.9	32.2%	42%–64%	$0.26 - $0.79
Saline lakes	363,584	18,179	$53–$105	$1.0-$1.9	32.2%	3%	$0.01 - $0.02
Subtotal	2,658,786	132,939	$53–$105	$8.4-$16.7	—	—	$0.66 - $2.12
Total	**6,363,086**	**318,154**	—	**$13.2-$23.5**	—	—	**$0.70 - $2.18**

[1] Additional fishing days in San Francisco Bay are estimated to be 10% of the baseline.
[2] Totals may not add up due to rounding.

8.3 NONCONSUMPTIVE WILDLIFE RECREATION VALUES

The 1996 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation (U.S. Department of the Interior, Fish and Wildlife Service, and U.S. Department of Commerce, Bureau of the Census, 1998) indicates that 5.96 million California residents aged 16 or older participated in wildlife watching in 1996. This participation included 17.9 million trips away from home (at least 1 mile) for the primary purpose of observing, photographing, or feeding wildlife. These estimates do not include secondary wildlife-watching activities, such as observing wildlife while pleasure driving (U.S. Department of the Interior, Fish and Wildlife Service, and U.S. Department of Commerce, Bureau of the Census, 1998). Approximately 5.7 million California residents aged 16 or older also participated in wildlife-related activities around the home, including observing, photographing, or feeding wildlife.

Research has shown that nonconsumptive wildlife recreation (viewing wildlife) is highly valued. For example, Rockel and Kealy (1991) estimate a total annual value nationwide of between $8.7 billion and $165 billion in 1980 dollars (with the range of results indicating a sensitivity of their model to functional form). Cooper and Loomis (1991) estimated the total annual value for bird viewing in California's San Joaquin Valley to be $64.7 million (in 1987 dollars), based on willingness to pay (WTP) estimates for all Californians. Cooper and Loomis found that WTP increased as the number of birds seen increased, with diminishing marginal returns evident in their results (Cooper and Loomis, 1991).

As described in the EA that accompanied the proposed CTR, CTR-related improvements in aquatic habitats may lead to healthier and more diverse populations of avian and terrestrial species and may manifest in increased participation and increased user day values for wildlife viewing activities. Without specific information as to the potential magnitude of changes in wildlife populations and thus viewing opportunities that may result from the toxic pollutant loading reductions anticipated under the rule, nonconsumptive wildlife recreation values cannot be estimated. Given the high baseline value, however, these benefits may be appreciable.

8.4 PASSIVE USE (NONUSE) VALUES

As noted in Chapters 5 and 6, individuals may value reduced toxic concentrations in California aquatic environments apart from any values associated with their direct or indirect use of the resource. These passive use (nonuse) values are difficult to estimate in the absence of carefully designed and executed contingent value surveys. "Benefits transfer" techniques, however, can be used to develop a rough approximation of the potential magnitude of these passive use values.

8.4.1 Passive Use Values for Recreational Anglers

Fisher and Raucher (1984) conducted an extensive review of the economics literature providing empirical evidence of the use and nonuse values associated with improved water quality and/or fisheries. Their review indicated that nonuse values are estimated to be *at least* half as great as recreational values. The authors concluded that if passive use values (for example, ecologic

values) are applicable to a policy action, using a 50% approximation is preferred, with proper caveats, to omitting passive use values from a benefit-cost analysis.

Several additional research efforts conducted subsequent to the Fisher and Raucher review provide additional support for the observation that omitting passive use values leads, in most cases, to an appreciable underestimate of total benefits. In some instances, such research has been interpreted to suggest that passive use benefits might be as much as (or more than) twice the recreational use values (e.g., Sutherland and Walsh, 1985; Sanders et al., 1990).

To estimate passive use values from estimates of recreational use benefits as described above, it is important to consider the extent to which the primary research efforts have evaluated resources, and changes in resources, that are reasonably comparable to the policy-affected site and the policy-induced environmental impacts. For the CTR, the resources in question are a large share of the water resources throughout California. These waters in general have, at baseline, some degree of toxics-related impairment, and the anticipated change in conditions due to the CTR will reduce the likelihood or severity of impairment in the future.

Generally, it is appropriate to apply the studies reviewed by Fisher and Raucher to the CTR. For example, the Carson and Mitchell study estimates a nationwide value for incremental freshwater quality improvements. Thus, the use of the 0.5 rule of thumb seems appropriate to an application of the CTR.

Studies with ratios of higher passive use to recreational use values may not be as applicable to the CTR. For example, the Sanders et al. results (implying a ratio of approximately 1.8 or 1:9) are based on a study of the value of preserving several free-flowing river segments in Colorado from the development of dams and other major, irreversible hydrological modifications. Given the magnitude and direction of the environmental change evaluated, coupled with the irreversibility of such changes, one would anticipate a relatively higher ratio of existence and bequest values to direct use values than for a rule similar to the CTR.[11]

Based on the available literature and the environmental changes being considered, EPA estimated passive use values for the CTR as one-half of recreational fishing benefits. These estimates are imprecise for several reasons, including the reliance on the benefits transfer technique and the potential that the underlying primary research studies may not themselves be precise or accurate for the environmental applications to which they were directly applied. It also may be the case that this approach underestimates passive use values because the "ecosystem" benefits may not be fully embodied in the contingent valuation studies being applied, or because of potential

[11] The Sanders et al. (1990) study has similar transferability issues. This study shows passive use values that relate to option price (recreational use and option value) with a ratio of 2 or higher, where the scenario is the potential degradation of a relatively pristine resource (Flathead Lake and River) by coal mining. Given the special qualities of the resource being evaluated (high baseline quality, the largest lake in the western United States), and the direction of change being evaluated (potential pollution from coal mining), the passive use values would be expected to be higher relative to use values than would be anticipated in a CTR context (moderate improvements in water quality in a wide variety of already impaired waters).

underestimation of the applicable recreational use values (if recreational benefits are overstated, then the reverse may be true).

In addition, because some primary studies suggest passive use values may exceed one-half of recreational values, and because recreational fishing values alone are used in lieu of total potential recreational values, the use of the 0.5 ratio is conservative. Furthermore, the primary studies reviewed generally are based on separating the respondent's (household's) total willingness to pay into the two components—passive use value and recreational use value. The 0.5 ratio therefore reflects the amount of passive use value that recreational angling households are willing to pay, above their recreational use values, to preserve or enhance water quality. This rule of thumb suggests that the potential magnitude of passive use values associated with implementation of the CTR for users ranges from $1.1 million per year to $7.6 million per year.

Applying the 50% rule of thumb to the CTR is, in essence, providing a rough estimate of passive use values only for those households that have active recreational anglers. Therefore, this estimate likely provides a very conservative lower bound; it implies that only recreational anglers have passive use values. As described below, EPA developed preliminary estimates of passive use values for non-angling households.

8.4.2 Passive Use Values for Non-Angling Households

To account for the passive use values held by non-angling households, which includes other water recreators such as boaters, swimmers, and nonusers, EPA assumed that the number of angling households is equivalent to the number of licensed anglers in the State of California. EPA then subtracted the number of angling households from all households in California to obtain the number of non-angling households. Because it is likely that there is more than one angler in some households, this assumption is conservative in that it will result in a lower estimate of non-angling households and values.

As an upper-bound estimate of passive use values for non-angling households, EPA assumed that these households have a passive use value equal to that of angling households. As a lower-bound estimate, EPA assumed that all non-angling households are nonuser households, and that they hold lower passive use values than angling households. EPA did not find any literature that provides an indication of how much lower these values might be. Some studies, however, provide information on the relationship between total WTP for water quality improvements for users and nonusers.

WTP Values for Users and Nonusers

EPA found several contingent valuation studies that estimated WTP for users and nonusers of water resources (See **Exhibit 8-20**); however, most of these studies have little relevance to the CTR. Brown and Duffield (1995) estimated WTP to protect the instream flow of a single river and a group of five rivers. Olsen et al. (1991) estimated WTP to double the size of salmon and steelhead runs in the Columbia River Basin. Croke et al. (1986–1987) estimated the WTP to improve water impaired by sewer overflows in Chicago to a level acceptable for outings, boating, and fishing. While these studies show how WTP compares for users and nonusers, they do not evaluate water quality controls or improvements similar to those anticipated for the CTR.

Additionally, Bockstael et al. (1989) report WTP to raise Chesapeake Bay water quality so that it is acceptable for swimming. This study evaluated WTP for clean-up efforts devoted to reducing toxic substances, but it also addresses nutrient over-enrichment and the decline of submerged vegetation. Mean WTP to make the bay acceptable for swimming was $38 for nonusers, which is approximately 31% of the value for users ($121). Since WTP for users includes a use value, 31% likely understates the relationship between passive use values between users and nonusers

Exhibit 8-20. Relationship Between Willingness to Pay Values for Users and Nonusers[1]

Study	WTP for Improvement		Ratio of WTP (nonusers to users)
	Users	Nonusers	
Brown and Duffield (1995)			
One river	$10.18	$3.55	35%
Five rivers	$18.02	$2.02	11%
Loomis et al. (1991)[2]			
Salmon improvement	$202	$181	90%
Contamination reduction	$360	$308	86%
Wetland improvement	$286	$251	88%
Olsen et al. (1991)	$6.18	$2.21	36%
Bockstael et al. (1989)	$121	$38	31%
Croke et al. (1986–1987)	$49.63	$45.76	92%

[1] Year of dollars for the WTP values are not reported since only the ratio between nonuser and user values are compared as opposed to the values themselves.

[2] WTP for users reflects survey responses of local households. WTP for nonusers reflects survey responses of the rest of California's households.

Loomis et al. (1991) may be the most applicable study. Loomis et al. (1991) estimated the benefits to California residents near a resource (users) and nonusers of improved fishery, wetland, and waterfowl resources in the San Joaquin Valley. They used a contingent value survey to determine California households' WTP to implement three wildlife programs: wetlands habitat and wildlife maintenance and improvement, wildlife contamination control, and San Joaquin River and salmon improvement. Mean WTP to improve salmon populations was $202 for users and $181 for nonusers. Mean WTP for contamination reduction was $360 for users and $308 for nonusers. Mean WTP for wetland improvement was $286 for users $251 for nonusers.

Thus, Loomis et al. (1991) provides California-specific research suggesting that nonusers' WTP may be 85% to 90% of the WTP for users.

Lower-Bound Estimate

Due to the nature of the impairment addressed by the CTR, it is likely that improvements may be more valued by users than nonusers, who may even be unaware of the contamination. Thus, as a lower-bound estimate, EPA assumed that passive use values for non-angling households may be 30% of those for angling households. This estimate is supported by Bockstael et al. (1989) who evaluated WTP for clean-up efforts devoted to reducing toxic pollutants to improve water quality in the Chesapeake Bay.

To estimate the number of non-angling households, EPA assumed that the number of recreational angling households is equivalent to the number of licensed recreational anglers, or approximately 1.4 million (California Department of Fish and Game, 1996). Subtracting this from the total number of households in California (approximately 11.1 million; U.S. Bureau of the Census, 1995) yields approximately 9.7 million non-angling households. Assuming a passive value that is 30% of the passive value for angling households yields a range of benefits from $2.3 million to $15.8 million per year for all non-angling households.[12]

Upper-Bound Estimate

As an upper bound, EPA assumed that passive use values for non-angling households may be 90% of those for angling households. This estimate is supported by Loomis et al. (1991), who specifically surveyed California residents near a resource (users) and statewide (nonusers). Multiplying the per household annual value for angling households, the number of non-angling households in California (9.7 million), and the assumed 90% passive use value for nonusers, results in a range of benefits from $7.0 million to $47.3 million per year.[13]

The overall passive use benefits for non-angling households range from $2.3 million per year to $47.3 million per year.

[12] EPA calculated a per household value for angling households of $0.80–$5.42 per year by dividing the passive use value estimated in the previous section ($1.1–$7.6 million per year) by the estimated number of angling households (1.4 million). Thirty percent of this value yields $0.24–$1.63 per household for non-angling households.

[13] The per household value for non-angling households is $0.72 - $4.88 in this case.

8.5 TOTAL VALUE OF SIMILAR IMPROVEMENTS

An alternative to estimating the individual categories of benefits resulting from water quality improvements is to estimate a total value for all types of benefits. Carson et al. (1994) and Loomis et al. (1991) provide total values for toxic-related water quality improvements based on contingent valuation research for California households. Carson et al. (1994) estimated the total value of a program to reduce the recovery time for four species in the Southern California Bight (bald eagles, peregrine falcons, white croaker, and kelp bass) that have been adversely affected by 4,4-DDT and PCBs. The authors estimated a household WTP of $55.61 in a one-time payment for the reduced recovery time. Loomis et al. (1991) estimated annual California household WTP of $254 in the form of higher taxes for wetland habitat improvement, $313 for water contamination reduction, and $183 for salmon fishery improvement (the study notes that the benefit of all three aspects would be somewhat less than the sum of the individually estimated benefits). Given the differences between the programs valued in these studies and the CTR, benefits transfer of a per household value for the CTR would be difficult. However, the studies illustrate WTP for the toxic-related water quality improvements anticipated from the CTR.

8.6 SUMMARY OF MONETIZED BENEFITS

A summary of the estimated monetized benefits from implementation of the CTR is provided in **Exhibit 8-21.** Human health benefits are estimated for San Francisco Bay and statewide freshwater resources; all other benefits are estimated statewide.

Exhibit 8-21. Summary of Annual Benefits from Implementation of the CTR (Millions of 1998 First Quarter Dollars)

Benefit Category	Annual Value
Human Health (cancer risk) San Francisco Bay Other saltwater resources Freshwater resources	 $0.1 - $0.4 + $1.17 - $4.20
Recreational Angling Increased value of existing trips Increased participation	 $1.53 - $12.99 $0.70 - $2.18
Wildlife Viewing	+
Passive Use Households with recreational anglers Other households	 $1.12 - $7.59 $2.32 - $47.31
Omitted Benefits[1]	+
Total	**$6.94 - $74.71**

[1] Benefits not monetized include noncancer human health effects, water-related recreation apart from fishing, and consumptive and nonconsumptive land-based recreation.
+: Positive benefits expected but not monetized.

The key omissions, biases, and uncertainties associated with the benefits analysis are shown in **Exhibit 8-22.** It was difficult to assess the overall impact of the omissions, biases, and uncertainties on the benefits estimates because the degree to which they might cause the

estimates to be underestimated or overestimated cannot be predicted with accuracy. Among the key factors described in Exhibit 8-22, however, the omission of potential benefit categories may have the most significant impact and would contribute to an underestimate of benefits. Several categories of potential or likely benefits were omitted from the quantified and monetized estimates (e.g., see U.S. EPA, 1997). In terms of potential magnitudes of benefits, the following are likely to be the most significant contributors to the underestimation of the monetized values presented in Exhibit 8-21:

Improvements in water-related (in-stream and near-stream) recreation apart from fishing. The omission of boating, swimming, picnicking, and related in-stream and stream-side recreational activities from the benefits estimates could contribute to an appreciable underestimation of total benefits. Such recreational activities have been shown in empirical research to be highly valued, and even modest changes in participation and or user values could lead to sizable benefits statewide. Some of these activities can be closely associated with water quality attributes, particularly swimming. Other recreational activities may be less directly related to the CTR-induced water quality improvements, but might nonetheless increase due to their association with fishing, swimming, or other activities in which the participants might engage.

Improvements in consumptive and nonconsumptive land-based recreation, such as hunting and wildlife viewing. CTR-related improvements in aquatic habitats may lead (via food chain and related ecologic benefit mechanisms) to healthier, larger, and more diverse populations of avian and terrestrial species, such as waterfowl, eagles, and otters. Improvements in the populations for these species could manifest as improved hunting and wildlife viewing opportunities, which might in turn increase participation and user day values for such activities. Although the scope of the benefits analysis has not allowed a quantitative assessment of these values at either baseline or post CTR conditions, these benefits may be appreciable.

Exhibit 8-22. Key Omissions, Biases, and Uncertainties in the Benefits Analysis for the CTR

Omissions/Biases/Uncertainties	Direction of Impact on Benefit/Cost Estimates	Comments
The monetized estimate of benefits omits some categories (e.g., noncancer human health effects, water-related recreation apart from fishing, and consumptive and nonconsumptive land-based recreation).	(-) The omission of potential benefit categories will cause benefits to be underestimated.	The potential magnitude of these benefits may be appreciable.
Human health benefits for saltwater anglers were estimated for San Francisco Bay only.	(-) The omission of other saltwaters may cause benefits to be underestimated.	The number of anglers fishing in other bays, estuaries, and saltwater lakes is estimated to be over 0.5 million anglers (U.S. EPA, 1997).
Human health exposure was calculated based on the assumption that each fish contained all contaminants of concern at the concentrations reported in the fish tissue data.	(+) To the extent that not all fish contain all contaminants at the assumed concentrations, benefits may be overestimated.	The uncertainties in estimating fish tissue concentrations are inherent in the approach used to estimate human health benefits.
Human health risks were based on contaminant concentrations in fish fillets or, for some species, fish fillets with skin.	(-) The use of fish fillets will underestimate risks to anglers that consume other body parts or untrimmed fillets.	The Santa Monica Bay Seafood Consumption Study (MBC Applied Environmental Services, 1994) reported that one-third of all anglers eat fish whole (but gutted), including nearly 50% of Asians and 44% of Hispanics.
Human health risks were based on contaminant concentrations in raw fish fillets.	(+) The use of raw fish fillets may overestimate benefits.	OEHHA (1991) noted that DDT concentrations decreased by 20% to 80% after cooking.
Toxic-impaired waters were defined as waters rated as medium or poor quality for at least one toxic pollutant or group of pollutants. The rating of these waters corresponds to U.S. EPA's not fully and partially supporting categories.	(+) The inclusion of medium-rated waters may result in an overestimate of toxic-impaired waters.	Toxic-impaired waters provide the basis for estimating toxic-impaired fishing days and thus recreational angling and passive use benefits.
Estimation of the increased value of current angling and increased participation in recreational angling assumes that anglers have not substituted away from contaminated waters.	(+) The assumption that anglers have not substituted away from contaminated waters is likely to cause benefits to be overestimated.	It is likely that some anglers have substituted away from contaminated waters.
Overall Impact on Benefits Estimates	(?)	The overall impact on benefits is uncertain because the degree to which the omissions, biases, and uncertainties might cause the estimates to be underestimated or overestimated is unknown.

+: Potential overestimate.
□: Potential underestimate.
?: Uncertain impact.

9.0 COMPARISON OF POTENTIAL BENEFITS TO COSTS

This chapter compares the potential benefits and costs attributable to implementation of the CTR. EPA compared these estimates using two approaches: (1) a direct comparison of annualized costs to benefits, and (2) a comparison of discounted benefits and costs.

9.1 COMPARISON OF ANNUALIZED BENEFITS AND COSTS

A direct comparison of the monetized annual (steady-state) benefits of the CTR and annualized costs shows benefits and costs to be generally commensurate given the uncertainty in the analysis and that several categories of benefits are unmonetized. As shown in **Exhibit 9-1**, the estimate of monetized benefits ranges from $6.9 million per year to $74.7 million per year. Annualized costs are $33.5 million under the low scenario and $61.0 million under the high scenario.

Exhibit 9-1. Comparison of Annual Potential Benefits and Costs of Implementing the CTR (Millions of 1998 First Quarter Dollars)

Comparison Method	Monetized Benefits	Annualized Costs	
		Low Scenario	High Scenario
Direct Annual Comparison[1]	$6.9 - $74.7	$33.5	$61.0

[1] These monetized costs and benefits are not directly comparable since several categories of benefits have not been monetized.

9.2 COMPARISON OF DISCOUNTED BENEFITS AND COSTS

Because the benefits and costs associated with implementation of the CTR may be characterized by an initial outlay of capital costs and a gradual phase-in of benefits, **Exhibit 9-2** presents a present value of benefits and costs over 30 years. This method applies a present value social accounting in which the streams of future benefits and costs are discounted to their present values to reflect society's rate of time preference. EPA considered two different phase-in scenarios to account for the potential delay in realizing benefits since many of the pollutants addressed by the CTR are persistent in the environment. To the extent that benefits of reducing toxic pollutants under the CTR are realized sooner, these scenarios may result in an underestimate of the present value of benefits. EPA assumed that there is a 7% opportunity cost of capital and that capital is replaced every 10 years. Since the life of capital typically exceeds 10 years, this assumption may result in an overestimate of costs. EPA calculated the present value of the streams of benefits and costs using discount rates of 3% and 7%.

As shown in Exhibit 9-2, discounted costs fall within the range of discounted benefits under the low scenario, but discounted costs exceed discounted benefits in three of the four cases shown for the high scenario. However, the assumption that capital is replaced every 10 years likely overstates costs. At the same time, benefits may be understated because some categories are not monetized and full benefits may be realized sooner than 10 or 20 years. Thus, EPA expects that the present value of benefits and costs is more commensurate than shown.

Exhibit 9-2. Comparison of Discounted Benefits and Costs of Implementing the CTR (Millions of 1998 First Quarter Dollars)[1]

Schedule of Benefits	Benefits[2]	Costs[3]	
		Low	High
3% Discount Rate			
10-Year Phase-In of Benefits	$108 - $1166	$617	$1033
20-Year Phase-In of Benefits	$82 - $883	$617	$1033
7% Discount Rate			
10-Year Phase-In of Benefits	$63 - $683	$421	$767
20-Year Phase-In of Benefits	$45 - $480	$421	$767

[1] Present values over 30 years.
[2] Benefits are phased in proportionately over 10 and 20 years, and have their full value in the remaining years. Benefits are not directly comparable to costs since several categories of benefits have not been monetized.
[3] Reflects capital costs plus a 7% cost of capital in years 1, 11, and 21, operating and maintenance costs in years 2 through 30.

9.3 CONCLUSIONS

Comparison of annual values of benefits and costs resulting from implementation of the CTR shows estimated costs falling within the range of monetized benefits. Comparison of 30-year present values of benefits and costs also shows costs under the low scenario to fall within the range of monetized benefits although costs under the high scenario generally fall just outside this range. However, EPA believes that benefits may actually be higher than shown because some categories of potential benefits have not been quantified or monetized. EPA was not able to quantify or monetize potential improvements in water-related recreation apart from fishing, such as boating, swimming, picnicking, and related in-stream and stream-side recreational activities. EPA was also unable to quantify or monetize potential improvements in wildlife viewing. Research indicates that wildlife viewing is a highly valued activity and that California residents value reductions in toxic pollutants that may affect wildlife resources. Thus, these omissions may result in an underestimate of benefits. In addition, using a capital life of 10 years likely overestimates potential compliance costs.

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APPENDIX A. ALTERNATIVES ANALYSIS

In conducting an analysis of the potential costs to point source dischargers as a result of implementing the CTR, EPA made a variety of assumptions. To test the impact of some of these assumptions on the analysis, EPA conducted two alternative analyses. First, EPA estimated the impact on costs associated with changing the human health risk level for carcinogenic pollutants. Second, EPA estimated the impact on costs associated with changing the application of criteria for heavy metals. Sections A.1 and A.2 present the methodology and costs associated with varying the human carcinogenic risks and applying toxic metals criteria in total recoverable form, respectively.

A.1 IMPACT OF HUMAN HEALTH RISK LEVEL

According to EPA's *Water Quality Standards Handbook:* Second Edition (U.S. EPA, 1994), EPA generally regulates carcinogenic toxic pollutants based on a range of assumed risk levels. This range is established based on 1 excess cancer case per 10,000 people (10^{-4}), 1 excess cancer case per 100,000 people (10^{-5}), and 1 excess cancer case per 1,000,000 people (10^{-6}). However, EPA does not recommend a particular risk level as policy.

The State of California historically has protected at a 10^{-6} risk level for carcinogenic pollutants. The CTR follows this history and establishes human health criteria for carcinogens based on a 10^{-6} risk level. The potential costs discussed in Chapter 4 of this report are based on these criteria.

In its readoption of its statewide plans for inland surface waters and enclosed bays and estuaries, however, California may consider other risk levels for carcinogenic pollutants. Again, EPA recommends that states consider minimum risk levels in the range of 10^{-4} to 10^{-6} for carcinogenic priority toxic pollutants to protect public health and welfare. Many states base their human health protection criteria on a 10^{-5} risk level.

The purpose of this analysis is to determine the change in potential costs should the CTR criteria for human health protection from carcinogens be based on a 10^{-5} risk level.

A.1.1 Methodology

EPA used the same methods described in Chapter 4 of this report to derive potential costs related to the use of a lower risk level for carcinogens. The only modification to the methodology is that EPA adjusted the proposed CTR criteria for carcinogens to reflect a lower risk level of 10^{-5}.

A.1.2 Results

Exhibit A-1 summarizes the results of the analysis of lowering the risk level for carcinogens in the proposed CTR. As Exhibit A-1 shows, the changes in estimated costs and pollutant load

reductions based on the lower risk level of 10^{-5} are minimal. Under the low scenario, costs decrease by $1.1 million, approximately 11% less than the costs based on the higher risk level. Under the high scenario, annual costs decrease by $5.8 million, also an 11% decrease from the costs based on a 10^{-6} risk level. Pollutant load reductions attributable to use of a lower risk level are estimated to decrease by approximately 4% and 1% under the low and high scenarios, respectively.

Exhibit A-1. Comparison of Estimated Costs if CTR-Based WQBELS Are Calculated Using a Cancer Risk Level of 10^{-5}

Approach	Low Scenario		High Scenario	
	Estimated Annual Costs ($millions)	Load Reductions (10^6 lbs-eq/yr)	Estimated Annual Costs ($millions)	Load Reductions (10^6 lbs-eq/yr)
Baseline Cost Analysis (10^{-6})	$33.5	1.08	$61.0	2.73
Alternative Analysis (10^{-5})	$32.4	1.04	$55.2	2.69

Note: All costs are in first quarter 1998 dollars.

The low sensitivity to the change in risk level primarily is related to the fact that most of the potential costs related to implementing the CTR are being driven by metals. Changes in risk levels for carcinogens primarily affect organic pollutants.

A.2 IMPACT OF METAL TRANSLATORS

The criteria for metals in the proposed rule are expressed in the dissolved form. Where a site specific or theoretical "translator" is used, the use of dissolved metals criteria usually results in permit limits that are less stringent than those derived from total recoverable criteria. The dissolved criteria in the CTR are derived by multiplying the total recoverable criterion by a conversion factor. Permitting regulations, however, require that permit limits be set in terms of total recoverable metals concentrations. Therefore, permit writers must "translate" dissolved criteria to derive total recoverable permit limits which can be done through a variety of methods.

One method employs site-specific information to derive the translator. This is EPA's preferred approach since it is likely to result in the best estimate of actual in-stream partitioning relationships. However, since not all site-specific information was available, the base analysis presented in Chapter 4 used a second method, the theoretical partitioning relationship, to estimate the translator. The theoretical partitioning relationship is based on a partitioning coefficient determined empirically for each metal and, when available, the concentration of total suspended solids in the site-specific receiving water. According to recent EPA guidance on translators (The Metals Translator: Guidance for Calculation of a Total Recoverable Permit Limit From a Dissolved Criteria), this method usually tends to overstate the stringency of the derived permit limit compared to the site-specific method, although it will sometimes understate the stringency (U.S. EPA, 1996). A third method is to simply use the total recoverable criteria that are derived by dividing the dissolved criteria by the conversion factor. This method is very conservative and

will, in nearly all cases, result in more stringent permit limits compared to the site-specific method.

Although EPA encourages the use of site-specific translators, some members of the regulated community expressed concern that the state may not choose this approach to derive permit limits. Thus, EPA performed a sensitivity analysis.

A.2.1 Methodology

EPA performed a sensitivity analysis to estimate the effect of the use of total recoverable criteria on CTR-based WQBELs, total costs, and load reductions. EPA calculated CTR-based WQBELs using the same methods described in Chapter 4, except that it used total recoverable criteria in place of dissolved criteria for metals.

A.2.2 Results

The results of this analysis show that costs may be sensitive to the translator chosen by the state. **Exhibit A-2** shows the expected costs and load reductions using conversion factors as the translators.

Exhibit A-2. Comparison of Potential Costs if CTR-based WQBELS Are Calculated Using Criteria Expressed as Total Recoverable

Approach	Low Scenario			High Scenario		
	Estimated Annual Costs ($millions)	Load Reductions (10^6 lbs-eq/yr)	Cost-Effectiveness ($/lb-eq)	Estimated Annual Costs ($millions)	Load Reductions (10^6 lbs-eq/yr)	Cost-Effectiveness ($/lb-eq)
Baseline Cost Analysis	$33.5	1.08	31	$61.0	2.73	22
Alternative Analysis	$62.4	1.25	50	$325.0	2.94	111

Note: All costs are in first quarter 1998 dollars.

As Exhibit A-2 shows, a significant increase in costs can be expected, as compared to the costs of the theoretical partitioning approach used in the base analysis. Potential annual costs under the low scenario are $62.4 million per year, an approximately two-fold increase over the estimates in the low base analysis. Under the high-end scenario, total costs are estimated to be nearly $325 million per year, over five times the cost estimates in the base analysis. Potential load reductions are estimated to increase by approximately 14% over the low base-case scenario, and by nearly 7% under the high scenario. Using conversion factors as translators would result in significantly higher costs per toxic pound-equivalent removed than the base analysis. The cost-effectiveness of the new low scenario is $50 per toxic pound-equivalent removed compared to $31 per toxic pound-equivalent removed in the base analysis. The cost-effectiveness of the new high scenario is $111 per toxic pound-equivalent removed compared to $22 per toxic pound-

equivalent removed in the base analysis.

EPA believes that the costs estimated from this analysis greatly overstate true costs. EPA expects that in cases where a facility may incur substantial economic impacts due to an effluent limit for a metal, there will be strong incentives for the facility or the state to develop site-specific data, which will result in more realistic translators, thus reducing potential economic impacts. EPA believes that the cost estimates developed using the theoretical partitioning approach in the base case are more realistic than the cost estimates from this sensitivity analysis.

APPENDIX B. COMPLIANCE COST DECISION MATRIX

I. REASONABLE POTENTIAL

1. Does the pollutant have a reasonable potential to exceed water quality criteria?

No ☐ → No compliance costs.

☐ Yes

II. MODIFY/ADJUST EXISTING TREATMENT

1. Is the WQBEL for the pollutant above analytical detection levels?
2. Does the existing wastewater treatment system have the capability to treat/remove the pollutant?
3. Is the WQBEL for the pollutant greater than documented treatable levels?
4. Are modifications/adjustments to the existing wastewater treatment system feasible in light of the pollutant reduction necessary to achieve the WQBEL (i.e., is the reduction less than 10-25% of the current discharge levels)?

Yes ☐ → Facility incurs costs to modify/adjust existing treatment system.

☐ No

III. WASTE MINIMIZATION/POLLUTION PREVENTION

1. Is the production process or source generating the pollutant amenable to waste minimization/pollution prevention techniques?

Yes ☐ → Facility incurs costs to implement waste minimization/pollution prevention.

Industrials Only	POTWs Only
2. Is the WQBEL for the pollutant above analytical detection levels? - If no, is the production process or pollutant source amenable to control techniques expected to reduce pollutant to below analytical detection levels (e.g., product substitution)? 3. Do any of the following conditions apply?: - Is the level of pollutant reduction required to meet the WQBEL insignificant (i.e., less than 10-25% of current discharge levels)? - Is the pollutant most often in compliance with the projected effluent limit? (i.e., 80% or more of the observations). - Are discharge monitoring data inconclusive to assume treatment costs? (e.g., no data exist, are limited or do not reflect existing discharge conditions).	2. Is the WQBEL for the pollutant above analytical detection levels? 3. Do any of the following conditions apply?: - Is the level of pollutant reduction required to meet the WQBEL insignificant (i.e., less than 10-25% of current discharge levels)? - Is the pollutant most often in compliance with the projected effluent limit? (i.e., 80% or more of the observations). - Are discharge monitoring data inconclusive to assume treatment costs? (e.g., no data exist, are limited, old, or mostly below detection level). 4. Are increased industrial user/source controls feasible?

☐ No

IV. NEW/ADDITIONAL TREATMENT SYSTEM

1. Is the WQBEL for the pollutant above analytical detection levels?
2. Is the effluent concentration for the pollutant sufficiently documented above detection levels and above documented treatable levels?
3. Is the new/additional treatment technology feasible in light of the:
   - existing treatment process(es)?
   - production process(es)?
   - pollutant source(s)?
   - level of pollutant reductions required to achieve the WQBEL (i.e., is it greater than 10-25% of the current discharge levels)?
   - cost to add the necessary treatment? [Note: Under the low scenario, the cost trigger is $200/toxic lb-equivalent for a specific facility for a pollutant].

Yes ☐

Facility incurs costs to install additional end-of-pipe treatment (or in-plant treatment).

☐ No

V. OTHER CONTROLS

1. Is the pollutant concentration above analytical detection levels, and treatable levels; and is the WQBEL below analytical detection levels?
2. Is a combination of end-of-pipe treatment and waste minimization/pollution prevention feasible in light of the:
   - existing treatment process(es)?
   - pollutant source(s)?
   - level of pollutant reductions required to achieve the WQBEL (i.e., is it greater than 10-25% of the current discharge levels)?
   - cost to add the necessary treatment? [Note: Under the low scenario, the cost trigger is $200/toxic lb-equivalent for a specific facility for a pollutant].

Yes ☐

Facility incurs costs for other controls.

☐ No

VIa. Phased TMDL	VIb. Variances from Water Quality Standards	VIc. Site-Specific Criteria	VId. Change Designated Use	VIe. Alternative Mixing Zone
1. Is the discharge to a non-attainment receiving water? 2. Are the other sources of pollutants to the receiving water known?	1. Is the pollutant naturally occurring? 2. Are there natural, ephemeral, intermittent or low flow conditions? 3. Are there human-caused conditions or sources? 4. Are dams, diversions, or other types of hydrologic modifications present? 5. Do the physical conditions related to the natural features of the water body contribute? 6. Would the controls result in substantial and widespread economic and social impact? If yes, will the discharge comply with anti-degradation requirements and cause no increased risk to human health and the environment?	1. Are local environmental conditions not reflected in criteria? 2. Are bio-accumulation factors appropriate?	1. Is the pollutant naturally occurring? 2. Are there natural, ephemeral, intermittent or low flow conditions? 3. Are there human-caused conditions or sources? 4. Are dams, diversions, or other types of hydrologic modifications present? 5. Do the physical conditions related to the natural features of the water body contribute? 6. Would the controls result in substantial and widespread economic and social impact?	1. Does the receiving water body offer a dilution ratio higher than the one presently indicated in the permit?
Facility incurs future cost to comply with TMDL.	Facility incurs costs for preparing variance request and future compliance costs when variance expires.	Facility incurs costs for preparing request for site-specific criteria.	Facility incurs costs associated with preparing a use attainability analysis.	Facility incurs costs to prepare demonstration.

APPENDIX C. DETAILED COST ESTIMATES

Costs, Low, Extrapolated

Pollutant	Total Capital	Annual Capital	Mon	O&M	Total Waste Min.	Annual Waste Min.	Total TPO	Annual TPO	Total TS	Annual TS	Total PT Study	Annual PT Study	Total LL Eval	Annual LL Eval	Total Variance	Annual Variance	Total Other	Annual Other	Totals By Poll.	Percent of Total
Antimony (Sb)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Arsenic (As)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Cadmium (Cd)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Chromium VI (Cr-VI)	0	0	0	0	0	0	1,076,524	155,558	0	0	0	0	0	0	0	0	0	0	0	0.0%
Copper (Cu)	0	0	0	0	4,748,214	676,039	5,771,000	1,248,793	0	0	0	0	0	0	0	0	0	0	153,558	1.5%
Lead (Pb)	0	0	0	0	0	0	375,000	81,867	0	0	0	0	0	0	1,676,190	238,652	0	0	2,163,484	21.8%
Mercury (Hg)	0	0	0	0	9,000,000	1,281,388	548,952	78,158	0	0	0	0	0	0	0	0	0	0	81,867	0.8%
Nickel (Ni)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,359,556	13.7%
Selenium (Se)	0	0	0	0	0	0	518,667	87,799	0	0	0	0	0	0	0	0	0	0	0	0.0%
Silver (Ag)	0	0	0	0	1,850,000	263,398	1,165,619	165,958	0	0	0	0	0	0	0	0	0	0	87,799	0.9%
Thallium (Tl)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	429,356	4.3%
Zinc (Zn)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
1,2 Dichlorobenzene	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,676,190	238,652	0	0	238,652	2.4%
1,2 Dichloroethane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
1,2 Dichloropropane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1,2-Trans-Dichloroethylene	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1,3 Dichlorobenzene	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
1,3-Dichloropropylene	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
1,4 Dichlorobenzene	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
2,4-Dinitrophenol	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
2,4,6 Trichlorophenol	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
4,4'-DDD	0	0	0	0	462,500	65,850	0	0	0	0	0	0	0	0	0	0	0	0	65,850	0.7%
4,4'-DDT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Aldrin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
alpha-BHC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
alpha-Endosulfan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Benzene	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Benzo (a) Anthracene	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Benzo (a) Fluoranthene	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Benzo (k) Fluoranthene	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
beta-BHC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
beta-Endosulfan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Bromoform	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Butylbenzyl-phtalate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Carbon Tetrachloride	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Chlordane	0	0	0	0	5,533,333	787,822	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Chlorobenzene	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	787,822	7.9%
Chlorodibromomethane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Chloroform	0	0	0	0	0	0	4,221,111	600,991	0	0	0	0	0	0	0	0	0	0	0	0.0%
Dichlorobromomethane	0	0	0	0	0	0	4,683,611	666,841	0	0	0	0	0	0	0	0	0	0	600,991	6.1%
Dieldrin	0	0	0	0	0	0	4,683,611	666,841	0	0	0	0	0	0	0	0	0	0	666,841	6.7%
Di-n-Butyl Phthalate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	666,841	6.7%
Endosulfan Sulfate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Endrin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Endrin Aldehyde	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Fluoranthene	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Fluorene	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
gamma-BHC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Heptachlor	0	0	0	0	4,462,500	635,360	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Heptachlor epoxide	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	635,360	6.4%
Hexachlorobenzene	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Methylene chloride	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
PCBs	0	0	0	0	5,533,333	787,822	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Pentachlorophenol	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	787,822	7.9%
Phenol	0	0	0	0	462,500	65,850	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
TCDD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	65,850	0.7%
Tetrachloroethylene	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Toluene	0	0	0	0	8,000,000	1,139,020	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Toxaphene	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,139,020	11.5%
Trichloroethylene	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%

Costs, High, Extrapolated

Pollutant	Total Capital	Annual Capital	Man	O&M	Total Waste Mln.	Annual Waste Mln.	Total TPO	Annual TPO	Total TS	Annual TS	Total PT Study	Annual PT Study	Total LL Eval	Annual LL Eval	Total Variance	Annual Variance	Total Other	Annual Other	Totals By Poll.	Percent of Total
Antimony (Sb)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Arsenic (As)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Cadmium (Cd)	0	0	0	0	7,904,762	1,125,450	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Chromium VI (Cr-VI)	0	0	0	0	11,854,762	1,687,851	3,312,964	471,692	0	0	0	0	0	0	0	0	0	0	1,125,450	2.2%
Copper (Cu)	4,777,143	680,158	0	418,000	27,466,310	3,913,432	749,302	106,684	0	0	0	0	0	0	0	0	0	0	2,159,543	4.2%
Lead (Pb)	0	0	0	0	11,616,508	1,698,490	959,133	136,475	0	0	0	0	0	0	0	0	0	0	5,118,275	10.1%
Mercury (Hg)	0	0	0	0	39,281,746	4,738,572	365,988	52,105	0	0	0	0	0	0	0	0	0	0	[illegible]	1.0%
Nickel (Ni)	4,777,143	680,158	0	418,000	8,521,429	1,213,280	961,298	136,867	0	0	0	0	0	0	0	0	0	0	4,790,676	9.4%
Selenium (Se)	0	0	0	0	12,163,095	1,731,751	961,298	136,867	0	0	0	0	0	0	0	0	0	0	2,448,285	4.8%
Silver (Ag)	4,777,143	680,158	0	418,000	25,279,762	3,599,269	3,676,933	523,797	0	0	0	0	0	0	0	0	0	0	1,868,618	3.7%
Thallium (Tl)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,221,224	10.3%
Zinc (Zn)	4,777,143	680,158	0	418,000	698,413	99,438	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
1,2 Dichlorobenzene	0	0	0	0	25,657,778	3,653,090	0	0	0	0	0	0	0	0	0	0	0	0	1,197,596	2.4%
1,2 Dichloroethane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,853,090	7.2%
1,2 Dichloropropane	0	0	0	0	0	0	2,470,667	351,767	0	0	0	0	0	0	0	0	0	0	0	
1,2-Trans-Dichloroethylene	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	351,767	
1,3 Dichlorobenzene	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
1,3-Dichloropropylene	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
1,4 Dichlorobenzene	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
2,4-Dinitrophenol	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
2,4,6 Trichlorophenol	0	0	0	0	462,500	65,850	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
4,4-DDD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	65,850	0.1%
4,4-DDT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Aldrin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
alpha-BHC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
alpha-Endosulfan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Benzene	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Benzo (a) Anthracene	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Benzo (a) Fluoranthene	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Benzo (k) Fluoranthene	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
beta-BHC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
beta-Endosulfan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Bromoform	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Butylbenzyl-phtalate	0	0	0	0	326,786	46,527	0	0	0	0	0	0	0	0	0	0	0	0	46,527	0.1%
Carbon Tetrachloride	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Chlordane	0	0	0	0	18,771,230	2,672,601	0	0	0	0	0	0	0	0	0	0	0	0	2,672,601	5.3%
Chlorobenzene	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Chlorodibromomethane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Chloroform	0	0	0	0	0	0	5,059,206	720,317	0	0	0	0	0	0	0	0	0	0	720,317	1.4%
Dichlorobromomethane	0	0	0	0	8,158,786	1,161,343	4,883,611	695,316	0	0	0	0	0	0	0	0	0	0	1,856,659	3.6%
Dieldrin	0	0	0	0	326,786	46,527	4,683,611	666,841	0	0	0	0	0	0	0	0	0	0	713,368	1.4%
Di-n-Butyl Phthalate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Endosulfan Sulfate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Endrin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Endrin Aldehyde	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Fluoranthene	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Fluorene	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
gamma-BHC	0	0	0	0	20,462,500	2,913,400	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Heptachlor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,913,400	5.7%
Heptachlor epoxide	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Hexachlorobenzene	0	0	0	0	2,213,333	315,129	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Methylene chloride	0	0	0	0	18,444,444	2,626,074	0	0	0	0	0	0	0	0	0	0	0	0	315,129	0.6%
PCBs	0	0	0	0	5,728,571	815,620	0	0	0	0	0	0	0	0	0	0	0	0	2,626,074	5.2%
Pentachlorophenol	0	0	0	0	7,675,833	1,092,856	0	0	0	0	0	0	0	0	0	0	0	0	815,620	1.6%
Phenol	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,092,856	2.1%
TCDD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Tetrachloroethylene	0	0	0	0	40,326,786	5,741,627	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Toluene	0	0	0	0	10,252,024	1,459,658	0	0	0	0	0	0	0	0	0	0	0	0	5,741,627	11.3%
Toxephene	0	0	0	0	326,786	46,527	0	0	0	0	0	0	0	0	0	0	0	0	1,459,658	2.9%
Trichloroethylene	0	0	0	0	326,786	46,527	0	0	0	0	0	0	0	0	0	0	0	0	46,527	0.1%
																			46,527	0.1%

EXHIBIT "16"

Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California

(Phase 1 of the Inland Surface Waters Plan and the Enclosed Bays and Estuaries Plan)

2000

STATE WATER RESOURCES CONTROL BOARD

California Environmental Protection Agency

STATE WATER RESOURCES CONTROL BOARD
RESOLUTION NO. 2000 - 015

ADOPTION OF THE POLICY FOR THE IMPLEMENTATION OF
TOXICS STANDARDS FOR INLAND SURFACE WATERS,
ENCLOSED BAYS, AND ESTUARIES OF CALIFORNIA (PROPOSED POLICY)

WHEREAS:

1. Section 303(c)(2)(B) of the Federal Clean Water Act (CWA) requires that states adopt numeric criteria for priority pollutants as part of the states' water quality standards.

2. In 1991, the State Water Resources Control Board (SWRCB) adopted the Inland Surface Waters Plan (ISWP) and the Enclosed Bays and Estuaries Plan (EBEP), in part, to comply with CWA section 303(c)(2)(B). The SWRCB amended the plans in 1993.

3. In 1994, the SWRCB rescinded the ISWP and the EBEP in response to a court ruling invalidating the plans. Since then, California has been without statewide water quality standards for the majority of priority pollutants for the State's non-ocean surface waters.

4. After rescission of the plans, the SWRCB and the U.S. Environmental Protection Agency (U.S. EPA) agreed to pursue a collaborative approach to reestablish the regulatory framework of the rescinded ISWP and EBEP and to bring California into compliance with CWA section 303(c)(2)(B). This approach consists of two phases. In Phase 1, the U.S. EPA will promulgate numeric water quality criteria for priority pollutants for California in accordance with CWA section 303(c)(2)(B), and the SWRCB will adopt statewide measures to implement those criteria in a statewide policy. In Phase 2, the SWRCB will consider the adoption of appropriate statewide water quality objectives for toxic pollutants.

5. The U.S. EPA is scheduled to promulgate the final California Toxics Rule (CTR) (proposed at 62 Federal Register 42160-42208, August 5, 1997) to be codified at 40 Code of Federal Regulations section 131.38 in March or April 2000. The CTR will establish statewide water quality criteria for priority toxic pollutants for California.

6. The SWRCB may formulate and adopt State policy for water quality control in accordance with California Water Code sections 13140-13147.

7. The SWRCB prepared and circulated drafts of the Functional Equivalent Document (FED) for a proposed Policy to implement the draft CTR in accordance with the provisions of the California Environmental Quality Act (CEQA) and California Code of Regulations, title 14, section 15251(g), and title 23, sections 3775-3782, as follows:

a. The First Public Draft of the proposed Policy and FED was released for public review on September 11, 1997; a Supplement to the FED was released on October 16, 1997; and an Addendum to the Supplement was released on October 28, 1997..

b. The Second Public Draft of the proposed Policy and FED was released for public review on November 12, 1999; Appendix G to the 1999 FED (responses to public comments on the first draft Policy) was released on December 7, 1999.

c. The Third Public Draft of the proposed Policy was released for public review on January 24, 2000; the third draft of the FED was released for public review on January 31, 2000; Appendix G to the 2000 FED (responses to public comments on the second draft Policy) was released on February 11, 2000.

d. Supplement 1 to Appendix G to the November 12, 1999 FED and Appendix G to the January 31, 2000 FED were released on February 11, 2000.

e. Supplement 2 to Appendix G to the November 12, 1999 FED and Supplement to Appendix G to the January 31, 2000 FED will be released at the March 2, 2000 SWRCB Meeting.

8. The SWRCB has conducted public hearings in Sacramento on November 17, 1997 and in Newport Beach on December 3, 1997 and a public workshop in Sacramento on December 6, 1999 to solicit comments regarding the proposed Policy. The SWRCB has reviewed and carefully considered all comments received on the first, second, and third drafts of the proposed Policy and FED. The SWRCB considered the information contained in the FED prior to approval of the proposed Policy.

9. The SWRCB submitted the first and second drafts of the proposed Policy and FED for external scientific peer review of the scientific basis for the proposed Policy under the requirements of Health and Safety Code section 57004..

10. By letter dated January 21, 2000 from Alexis Strauss, Director of the Water Division at U.S. EPA, Region 9, to Walt Pettit, SWRCB Executive Director (January 21 letter), the U.S. EPA notified the SWRCB of the more important changes that U.S. EPA staff has proposed to the U.S. EPA Administrator for the final CTR. The SWRCB has reviewed the proposed CTR changes, and it finds that they do not require revisions to the proposed Policy or FED.

11. Further, the SWRCB does not anticipate that any additional changes to the final CTR will require the SWRCB to revise the adopted Policy (Policy) or final FED. If, however, the final CTR is substantially changed from the CTR as proposed and with the changes referenced in the January 21 letter, and if these changes will require revisions in the Policy or major revisions in the final FED, the SWRCB will reconsider the Policy.

12. In order to expedite the effective date of the Policy, the SWRCB has decided to adopt the Policy now, but to delay its effective date until the effective date of the CTR.

13. In addition, the regulatory provisions of the Policy will not become effective until they are approved by the Office of Administrative Law (OAL) in accordance with Government Code section 11349.3(a).

14. The SWRCB makes the following specific findings regarding its CEQA responsibilities:

    a. The Third Public Draft FED has been completed in compliance with CEQA (Public Resources Code section 21000 et seq.), the CEQA guidelines, and the procedures of the State of California for Certified Regulatory Programs (Public Resources Code section 21080.5, California Code of Regulations, title 14, sections 15250-15253, and title 23, sections 3775-3782); the SWRCB has reviewed and considered the Third Public Draft FED prior to its decision to approve the proposed Policy; and the Third Public Draft FED reflects the independent judgment of the SWRCB.

    b. The Third Public Draft FED identified potentially significant adverse environmental effects related to only one Policy provision. These potential effects stem from Policy provisions allowing RWQCB authorization of a longer compliance schedule where necessary to develop and implement a Total Maximum Daily Load (TMDL) and accompanying wasteload allocations and load allocations. As compared to the CTR, under the Policy dischargers could be allowed up to ten additional years to accommodate development of TMDLs. Adverse environmental effects could occur during this period because water quality standards for priority pollutants established to protect human health and aquatic life may not be met. Such potential adverse effects could occur to surface and ground water quality; endangered, threatened, or rare species; locally designated species or natural communities; wetland or other fish and wildlife habitat; human health; or recreational opportunities.

    c. The Policy contains provisions to lessen or avoid potentially significant adverse effects on the environment stemming from the TMDL compliance schedule provisions. These provisions include the following:

(1) The compliance schedule provisions are narrowly written to apply only to those situations where the discharger demonstrates that it is infeasible to achieve immediate compliance with the CTR criteria;

(2) The compliance schedule provisions do not apply to new discharges;

(3) The discharger must submit the following justification before compliance schedules may be authorized in a permit:

(a) Documentation that diligent efforts have been made to quantify pollutant levels in the discharge and the sources of the pollutant in the waste stream, and the results of those efforts,

(b) Documentation of source control and/or pollution minimization efforts currently underway or completed,

(c) A proposed schedule for additional source control measures, pollutant minimization actions, or waste treatment (i.e., facility upgrades), and

(d) A demonstration that the proposed schedule is as short as practicable;

(4) The schedule of compliance must be as short as practicable and must include specified required actions that demonstrate progress toward attainment of the CTR criterion or effluent limitation;

(5) Longer compliance schedules for TMDL development will be authorized only if the discharger has made appropriate commitments to support and expedite the development of the TMDL;

(6) If a compliance schedule is granted, the Policy requires that the Regional Water Quality Control Board (RWQCB) establish interim requirements and dates for their achievement in the National Pollutant Discharge Elimination System (NPDES) permit;

(7) If the compliance schedule exceeds one year, the RWQCB must establish limitations for the priority pollutant in the NPDES permit and may also impose interim requirements to control the pollutant, such as pollutant minimization and source control measures;

(8) Numeric limitations must be based on current treatment facility performance or existing NPDES permit limitations, whichever is more stringent; and

(9) The Policy requires each discharger to report, in writing, its compliance or noncompliance with the interim requirements. Both the interim requirements and reporting requirements are fully enforceable NPDES permit conditions.

d. Alternatives to the Policy provisions for TMDL-based compliance schedules for implementing the CTR identified in the FED are infeasible. These alternatives are discussed below:

Alternative 1. No Action. If the SWRCB does not adopt Policy provisions for compliance schedules for implementation of the CTR, compliance schedules for discharges which receive effluent limitations that are not based on TMDLs are substantially the same. Both the CTR and the Policy would allow compliance schedules of up to five years from NPDES permit issuance, reissuance, or modification with a maximum deadline of ten years from the effective date of the CTR or Policy, respectively. (It is anticipated that the Policy and CTR effective dates will differ only by a few weeks.) There is no significant difference in these time frames; therefore, no significant impacts to the environment would result.

Under this alternative, longer compliance schedules to coincide with TMDL schedules could not be authorized by the RWQCBs. The SWRCB finds that this is not a feasible alternative because eliminating these compliance schedules for TMDLs is unrealistic. Currently, over 500 water bodies are listed as impaired on the CWA section 303(d) list. More than 1400 impairments are cited for these waters. Existing U.S. EPA policy requires that the states develop schedules for TMDL development of up to 13 years, beginning with the 1998 lists. U.S. EPA has proposed, however, in draft TMDL regulations published in August 1999, that the states develop schedules for establishing TMDLs as expeditiously as practicable, but no later than 15 years from the date of the initial listing. The draft regulations also contemplate that each TMDL include an implementation plan containing a timeline, including interim milestones, for implementing control actions and management measures necessary to achieve the wasteload allocations and load allocations. The implementation plan also must include an estimate of the time required to achieve water quality standards. In the draft rule, U.S. EPA recognizes that relatively longer time frames may be necessary for problems that are extremely difficult to solve. The Policy's TMDL compliance schedule provisions are consistent with U.S. EPA's direction.

Alternatives 2-5. Adopt a compliance schedule of: up to 3 years from the effective date of the proposed Policy (Alternative 2); up to 10 years from the effective date of the proposed Policy (Alternative 3); up to 15 years from the effective date of the proposed Policy (Alternative 4); or up to 5 years from the date of permit issuance, reissuance, or modification (Alternative 5).

The SWRCB finds that these are not feasible alternatives for TMDL-based compliance schedules for the reasons explained under Alternative 1.

e. The SWRCB finds that there are no feasible alternatives or additional feasible mitigation measures available to the SWRCB that would substantially lessen any potentially significant adverse environmental effects associated with the Policy provisions authorizing longer compliance schedules for TMDLs.

f. The SWRCB has eliminated or substantially lessened all significant adverse effects on the environment associated with the Policy provisions authorizing longer compliance schedules for TMDLs. The remaining Policy provisions will not have a significant effect on the environment.

g. To the extent that the potential for any impacts remains associated with longer compliance schedules for TMDLs, the SWRCB finds that there are overriding considerations that outweigh any adverse environmental effects that may potentially occur due to the TMDL-based compliance schedules provisions of the Policy.

Implementing TMDLs for priority pollutants may result in greater overall improvements to water quality because all significant sources of a pollutant will be addressed. If a TMDL is under development, the discharger must still immediately comply with CTR-based effluent limitations if it is feasible to do so. If it is infeasible, the discharger must comply with RWQCB interim requirements that demonstrate progress toward meeting the CTR criterion or effluent limitation. The Policy provides that the RWQCB can impose requirements for source control and pollution minimization/prevention during the compliance schedule period. However, to require the discharger to install expensive treatment controls to comply with a CTR-based effluent limitation while the TMDL is under development could result in unnecessary costs and unnecessary secondary environmental effects due to construction of the treatment controls.

THEREFORE BE IT RESOLVED THAT:

The SWRCB:

1. Approves the FED for the proposed Policy.

2. Adopts the proposed Policy, provided that the Policy shall not go into effect unless and until the final CTR is effective and the regulatory provisions of the Policy have been approved by OAL in compliance with the Administrative Procedure Act.

3. Intends to reconsider the Policy if the final CTR is substantially changed from the CTR, as proposed and with the changes referenced in the January 21 letter, and if these changes require revisions in the Policy or major revisions in the final FED.

STATE WATER RESOURCES CONTROL BOARD
RESOLUTION NO. 2000 - 030

AMENDING RESOLUTION NO. 2000-15 REGARDING ADOPTION OF THE POLICY FOR THE IMPLEMENTATION OF TOXICS STANDARDS FOR INLAND SURFACE WATERS, ENCLOSED BAYS, AND ESTUARIES OF CALIFORNIA (PROPOSED POLICY)

WHEREAS:

1. On March 2, 2000, the State Water Resources Control Board (SWRCB), in Resolution No. 2000-15, adopted a Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (Policy).

2. The Policy establishes implementation procedures for three categories of priority pollutant criteria or water quality objectives. These are priority pollutant: (1) criteria promulgated by the U.S. Environmental Protection Agency (U.S. EPA) in the National Toxics Rule that apply in California; (2) criteria proposed by U.S. EPA in the California Toxics Rule; and (3) water quality objectives contained in Regional Water Quality Control Board (RWQCB) water quality control plans (basin plans).

3. Under Resolution No. 2000-015, the Policy is effective when the Policy is approved by the Office of Administrative Law and the California Toxics Rule becomes effective.

4. U.S. EPA has experienced delays in promulgating the California Toxics Rule as a final rule.

5. Priority pollutant criteria in the National Toxics Rule and water quality objectives in RWQCB basin plans are currently in effect.

6. The SWRCB does not wish to delay implementation of the Policy with respect to applicable National Toxics Rule criteria and water quality objectives for priority pollutants.

THEREFORE BE IT RESOLVED THAT:

The SWRCB amends Resolution No. 2000-015 as follows:

1. Resolved No. 2 is deleted and replaced with:

   "2. Adopts the proposed Policy."

2. New Resolved Nos. 3 and 4 are added and existing Resolved Nos. 3 through 7 are renumbered accordingly:

"3. Provides that the Policy shall go into effect with respect to National Toxics Rule priority pollutant criteria that are applicable in California and priority pollutant water quality objectives in RWQCB basin plans upon approval by the Office of Administrative Law."

"4. Provides that the Policy shall go into effect with respect to California Toxics Rule criteria when the Policy is approved by the Office of Administrative Law and the California Toxics Rule becomes effective."

CERTIFICATION

The undersigned, Administrative Assistant to the Board, does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the State Water Resources Control Board held on April 26, 2000.

Maureen Marché
Administrative Assistant to the Board

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Section Page

POLICY FOR IMPLEMENTATION OF TOXICS STANDARDS FOR INLAND SURFACE WATERS, ENCLOSED BAYS, AND ESTUARIES OF CALIFORNIA

INTRODUCTION

This state policy for water quality control (Policy), adopted by the State Water Resources Control Board (SWRCB) on March 2, 2000 and effective by May 22, 2000 (See "Note" below), applies to discharges of toxic pollutants into the *inland surface waters, *enclosed bays, and *estuaries of California subject to regulation under the State's Porter-Cologne Water Quality Control Act (Division 7 of the Water Code) and the federal Clean Water Act (CWA). Such regulation may occur through the issuance of National Pollutant Discharge Elimination System (NPDES) permits, the issuance or waiver of waste discharge requirements (WDRs), or other relevant regulatory approaches.[1] The goal of this Policy is to establish a standardized approach for permitting discharges of toxic pollutants to non-*ocean surface waters in a manner that promotes statewide consistency. As such, this Policy is a tool to be used in conjunction with watershed management approaches and, where appropriate, the development of Total Maximum Daily Loads (TMDLs) to ensure achievement of water quality standards (i.e., water quality criteria or objectives, and the beneficial uses they are intended to protect, as well as the State and federal antidegradation policies).

This Policy establishes: (1) implementation provisions for priority pollutant criteria promulgated by the U.S. Environmental Protection Agency (U.S. EPA) through the National Toxics Rule (NTR)[2] (promulgated on December 22, 1992 and amended on May 4, 1995) and through the California Toxics Rule (CTR)[3], and for priority pollutant objectives established by Regional Water Quality Control Boards (RWQCBs) in their water quality control plans (basin plans)[4]; (2) monitoring requirements for 2,3,7,8-TCDD equivalents; and (3) chronic toxicity control provisions. In addition, this Policy includes special provisions for certain types of discharges and factors that could affect the application of other provisions in this Policy. With respect to nonpoint source discharges, only section 5.1 applies.

Note: This Policy was effective on April 28, 2000 with respect to the priority pollutant criteria promulgated for California by the U.S. EPA through the National Toxics Rule and to the priority pollutant objectives established by Regional Water Quality Control Boards in their water quality control plans (basin plans), with the exception of the provision on alternate test procedures in section 2.3., item (1). The alternate test procedures provision was effective on May 22, 2000. This Policy was effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the U.S. EPA through the California Toxics Rule.

1 This Policy does not apply to discharges of toxic pollutants from combined sewer overflows. These discharges will continue to be regulated in accordance with the federal "Combined Sewer Overflow (CSO) Control Policy," published April 19, 1994 (59 Fed. Register 18688-18698). This Policy does not apply to regulation of storm water discharges. The SWRCB has adopted precedential decisions addressing regulation of municipal storm water discharges in Orders WQ 91-03, 91-04, 96-13, 98-01, and 99-05. The SWRCB has also adopted two statewide general permits regulating the discharge of pollutants contained in storm water from industrial and construction activities. See SWRCB Orders 99-08-DWQ and 97-03-DWQ.

2 40 CFR 131.36

3 65 Fed. Register 31682-31719 (May 18, 2000), adding Section 131.38 to 40 CFR.

4 If a water quality objective and a CTR criterion are in effect for the same priority pollutant, the more stringent of the two applies.

With the exception of Appendix 5 (Special Studies) and Appendix 6 (Watershed Management and TMDLs), the provisions of this Policy have full regulatory effect. Appendix 5 is provided as guidance that may be followed in planning and conducting special studies that may be needed to implement the provisions of this Policy. Appendix 6 is provided as information on the role of watershed management approaches and TMDL development in achieving water quality standards.

Except as provided in section 4, this Policy supersedes basin plan provisions to the extent that (1) they apply to implementation of water quality standards for priority pollutants, and (2) they regard the same subject matter as that addressed in this Policy with respect to priority pollutant standards. For example, the Policy supersedes basin plan mixing zone provisions to the extent that they apply to implementation of water quality standards for priority pollutants.

Reference to a RWQCB also refers to SWRCB, where appropriate. Terms indicated with an asterisk (*) are defined in Appendix 1.

1.E STABLISHING WATER QUALITY-BASED EFFLUENT LIMITATIONS FOR PRIORITY POLLUTANT CRITERIA/OBJECTIVES

The following sections address the issues of: (1) applicable priority pollutant criteria and objectives (section 1.1); (2) data requirements and adjustments (section 1.2); (3) determining priority pollutants requiring water quality-based effluent limitations (section 1.3); (4) calculating effluent limitations (section 1.4); (5) translators for metals and selenium (section 1.4.1); (6) mixing zones and dilution credits (section 1.4.2); (7) ambient background concentrations (section 1.4.3); and (8) intake water credits (section 1.4.4). Notwithstanding the provisions of these sections, effluent limitations must protect beneficial uses and comply with the State and federal antidegradation policies[5], federal antibacksliding requirements[6], and other applicable provisions of law.

1.1 Applicable Priority Pollutant Criteria and Objectives

Federal water quality criteria and State water quality objectives for priority pollutants have been established for non-ocean surface waters of California by the U.S. EPA and some RWQCBs, respectively. Federal priority pollutant criteria have been promulgated by the U.S. EPA in the 1992 NTR (amended in 1995) and in the 2000 CTR. For California, the criteria in the CTR supplement the criteria in the NTR (i.e., the CTR does not change or supersede any criteria previously promulgated for California in the NTR, but it does include them in the table of criteria for convenience). State priority pollutant objectives are contained in RWQCB basin plans.[4]

The RWQCB basin plans designate the beneficial uses that apply to the surface water bodies within their respective regions. Priority pollutant criteria/objectives are specifically established for the protection of aquatic life and human health beneficial uses designated in basin plans. Aquatic life criteria/objectives are established for fresh and salt waters. The CTR specifies the salinities to which the freshwater and saltwater criteria apply. The CTR also states that, except as specified in the CTR, the federal criteria apply to all waters assigned any aquatic life or human health use

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[5] SWRCB Resolution No. 68-16 (Statement of Policy with Respect to Maintaining High Quality of Waters in California), and 40 CFR 131.12 (revised as of July 1, 1996), respectively.

[6] CWA Sections 402(o)(1) and 303(d)(4), and 40 CFR 122.44(l) and 40 CFR 122.62 (revised as of July 1, 1996).

designated in basin plans. It further states that the application of the criteria are based on the presence in all waters of some aquatic life designation and the presence or absence of the municipal and domestic supply (MUN) designation (i.e., the aquatic life criteria and the human health criteria for consuming water and organisms apply to MUN-designated water bodies; the aquatic life criteria and the human health criteria for consuming organisms only apply to non-MUN water bodies).

Designated beneficial uses to which aquatic life criteria or objectives would apply include, but are not necessarily limited to, warm freshwater habitat (WARM), cold freshwater habitat (COLD), and estuarine habitat (EST). Designated beneficial uses to which human health criteria/objectives would apply include, but are not necessarily limited to, municipal and domestic supply (MUN) and water contact recreation (REC1). Human health criteria/objectives are differentiated by whether organisms alone from the water body are consumed compared to whether both organisms and water from the water body are consumed. Where MUN is designated, the latter situation applies.

1.2 Data Requirements and Adjustments

The RWQCB shall issue Water Code Section 13267 or 13383 letters to all NPDES dischargers within their respective regions requiring the submittal of data sufficient to conduct the determination based on the analysis in section 1.3 and to calculate water quality-based effluent limitations in accordance with section 1.4 (excluding the development of a translator in accordance with section 1.4.1). The letter shall specify a time schedule for providing the data to the RWQCB that is as short as practicable but not to exceed three years from the effective date of this Policy. If the NPDES permit is reissued prior to completing the requirements, the schedule shall be included in the permit as interim requirements (in accordance with section 2.2.2). The permit shall be reopened to establish water quality-based effluent limitations, if necessary.

It is the discharger's responsibility to provide all data and other information requested by the RWQCB before the issuance, reissuance, or modification of a permit to the extent feasible. When implementing the provisions of this Policy, the RWQCB shall use all available, valid, relevant, representative data and information, as determined by the RWQCB. The RWQCB shall have discretion to consider if any data are inappropriate or insufficient for use in implementing this Policy. Instances where such consideration is warranted include, but are not limited to, the following: evidence that a sample has been erroneously reported or is not representative of effluent or ambient receiving water quality; questionable quality control/quality assurance practices; and varying seasonal conditions. The lack of a site-specific objective for a priority pollutant shall not be considered insufficient data.

When implementing the provisions of this Policy, the RWQCB shall ensure that criteria/objectives are properly adjusted for hardness or pH, if applicable, using the hardness or pH values for the receiving water, and that translators are appropriately applied (in accordance with section 1.4.1), if applicable. The RWQCB shall also ensure that pollutant and flow data are expressed in the appropriate forms and units for purposes of comparability and calculations.

1.3 Determination of Priority Pollutants Requiring Water Quality-Based Effluent Limitations

The RWQCB shall conduct the analysis in this section for each priority pollutant with an applicable criterion or objective, excluding priority pollutants for which a Total Maximum Daily Load (TMDL) has been developed, to determine if a water quality-based effluent limitation is required in the discharger's permit. It is the discharger's responsibility to provide all information requested by the RWQCB for use in the analysis. The RWQCB shall use all available, valid, relevant, representative information, as described in section 1.2, to determine whether a discharge may: (1) cause, (2) have a reasonable potential to cause, or (3) contribute to an excursion above any applicable priority pollutant criterion or objective. If the following analysis (which is depicted as a flowchart in Appendix 2) indicates that a limitation for a pollutant is required, the RWQCB shall establish the limitation in accordance with section 1.4.

Step 1: Identify applicable water quality criteria and objectives for priority pollutants as described in section 1.1. Determine the lowest (most stringent) water quality criterion or objective for the pollutant applicable to the receiving water (C). Adjust the criterion or objective, if applicable, as described in section 1.2. If it is necessary to express a dissolved metal or selenium criterion/objective as total recoverable and a site-specific translator has not yet been developed, as described in section 1.4.1, the RWQCB shall use the applicable U.S. EPA conversion factor (Appendix 3).

Step 2: Identify all effluent data for the pollutant as described in section 1.2 and proceed with *Step 3*. If effluent data are unavailable or insufficient, proceed with *Step 5*.

Step 3: Determine the observed maximum pollutant concentration for the effluent (MEC). If the pollutant was **not** detected in any of the effluent samples **and** any of the reported detection limits are below the C, use the lowest detection limit as the MEC and proceed with *Step 4*. If the pollutant was **not** detected in any of the effluent samples **and** all of the reported detection limits are greater than or equal to the C value, proceed with *Step 5*.

Step 4: Adjust the MEC from *Step 3*, if applicable, as described in section 1.2. Compare the MEC from *Step 3* or the adjusted MEC to the C from *Step 1*. If the MEC is greater than or equal to the C, an effluent limitation is required and the analysis for the subject pollutant is complete. If the MEC is less than the C, proceed with *Step 5*.

Step 5: Determine the observed maximum ambient background concentration for the pollutant (B) as described in section 1.4.3.1 and proceed with *Step 6*. If B data are unavailable or insufficient, proceed with *Step 7*.

Step 6: Adjust the B from *Step 5*, if applicable, as described in section 1.2. Compare the B from *Step 5* or the adjusted B to the C from *Step 1*. If the B is greater than the C, an effluent limitation is required and the analysis for the subject pollutant is complete. If the B is less than or equal to the C, proceed with *Step 7*.

Step 7: Review other information available to determine if a water quality-based effluent limitation is required, notwithstanding the above analysis in *Steps 1* through *6*, to protect beneficial uses.

Information that may be used includes: the facility type, the discharge type, solids loading analysis, lack of dilution, history of compliance problems, potential toxic impact of discharge, fish tissue residue data, water quality and beneficial uses of the receiving water, CWA 303(d) listing for the pollutant, the presence of endangered or threatened species or critical habitat, and other information. If data or other information is unavailable or insufficient to determine if a water quality-based effluent limitation is required, proceed with *Step 8.*

Step 8: If data are unavailable or insufficient to conduct the above analysis for the pollutant, or if all reported detection limits of the pollutant in the effluent are greater than or equal to the C value, the RWQCB shall establish interim requirements, in accordance with section 2.2.2, that require additional monitoring for the pollutant in place of a water quality-based effluent limitation. Upon completion of the required monitoring, the RWQCB shall use the gathered data to conduct the analysis in *Steps 1* through *7* above and determine if a water quality-based effluent limitation is required.

The RWQCB shall require periodic monitoring (at least once prior to the issuance and reissuance of a permit) for pollutants for which criteria or objectives apply and for which no effluent limitations have been established; however, the RWQCB may choose to exempt low volume discharges, determined to have no significant adverse impact on water quality, from this monitoring requirement.

1.4 Calculation of Effluent Limitations

When a RWQCB determines, using the procedures described in section 1.3, that water quality-based effluent limitations are necessary to control a priority pollutant in a discharge, the permit shall contain effluent limitations developed using one or more of the following methods:

A. If a TMDL is in effect, assign a portion of the loading capacity of the receiving water to each identified priority pollutant source of waste, point and nonpoint, based on the TMDL (see Appendix 6);

B. Use the following procedure based on a steady-state model:

Step 1: For each priority pollutant identified in section 1.3, identify the applicable water quality criteria/objectives for the pollutant as described in section 1.1. Adjust the criterion or objective, if applicable, as described in section 1.2. If it is necessary to express a dissolved metal or selenium criterion/objective as total recoverable and a site-specific translator has not yet been developed, as described in section 1.4.1, the RWQCB shall use the applicable U.S. EPA conversion factor (Appendix 3). If data are insufficient to calculate the effluent limitation, the RWQCB shall establish interim requirements in accordance with section 2.2.2.

Step 2: For each water quality criterion/objective, calculate the effluent concentration allowance (*ECA*) using the following steady-state mass balance equation:

$ECA = C + D\,(C - B)$ when $C > B$, and
$ECA = C$ when $C \leq B$,

where C = the priority pollutant criterion/objective, adjusted (as described in section 1.2), if necessary, for hardness, pH, and translators (as described in section 1.4.1);
D = the dilution credit (as determined in section 1.4.2); and
B = the ambient background concentration. The ambient background concentration shall be the observed maximum as determined in accordance with section 1.4.3.1 with the exception that an *ECA* calculated from a priority pollutant criterion/objective that is intended to protect human health from carcinogenic effects shall use the ambient background concentration as an arithmetic mean determined in accordance with section 1.4.3.2.

The concentration units for C and B must be identical. Both C and B shall be expressed as total recoverable, unless inappropriate. The dilution credit is unitless.

Step 3: For each *ECA* based on an aquatic life criterion/objective, determine the long-term average discharge condition (*LTA*) by multiplying the *ECA* with a factor (multiplier) that adjusts for effluent variability. The multiplier shall be calculated as described below, or shall be found in Table 1. To use Table 1, the *coefficient of variation (*CV*) for the effluent pollutant concentration data must first be calculated. If (a) the number of effluent data points is less than ten, or (b) at least 80 percent of the data are reported as not detected, the *CV* shall be set equal to 0.6. When calculating *CV* in this procedure, if an effluent data point is below the detection limit for the pollutant in that sample, one-half of the detection limit shall be used as a value in the calculations. Multipliers for acute and chronic criteria/objectives that correspond to the *CV* can then be found in Table 1.

ECA Multipliers

$$\text{ECA multiplier}_{\text{acute}_{99}} = e^{(0.5\sigma^2 - z\sigma)}$$

$$\text{ECA multiplier}_{\text{chronic}_{99}} = e^{(0.5\sigma_4^{\,2} - z\sigma_4)}$$

Where σ = *standard deviation
σ = $[ln(CV^2 + 1)]^{0.5}$
σ^2 = $ln(CV^2 + 1)$
σ_4 = $[ln(CV^2/4 + 1)]^{0.5}$
$\sigma_4^{\,2}$ = $ln(CV^2/4 + 1)$
z = 2.326 for 99th percentile probability basis

Table 1. Effluent Concentration Allowance (ECA) Multipliers for Calculating Long-Term Averages (LTAs)

Coefficient of Variation (CV)	Acute Multiplier	Chronic Multiplier
	99th Percentile Occurrence Probability	99th Percentile Occurrence Probability
0.1	0.797	0.891
0.2	0.643	0.797
0.3	0.527	0.715
0.4	0.440	0.643
0.5	0.373	0.581
0.6	0.321	0.527
0.7	0.281	0.481
0.8	0.249	0.440
0.9	0.224	0.404
1.0	0.204	0.373
1.1	0.187	0.345
1.2	0.174	0.321
1.3	0.162	0.300
1.4	0.153	0.281
1.5	0.144	0.264
1.6	0.137	0.249
1.7	0.131	0.236
1.8	0.126	0.224
1.9	0.121	0.214
2.0	0.117	0.204
2.1	0.113	0.195
2.2	0.110	0.187
2.3	0.107	0.180
2.4	0.104	0.174
2.5	0.102	0.168
2.6	0.100	0.162
2.7	0.098	0.157
2.8	0.096	0.153
2.9	0.094	0.148
3.0	0.093	0.144
3.1	0.091	0.141
3.2	0.090	0.137
3.3	0.089	0.134
3.4	0.088	0.131
3.5	0.087	0.128
3.6	0.086	0.126
3.7	0.085	0.123
3.8	0.084	0.121
3.9	0.083	0.119
4.0	0.082	0.117

LTA Equations

LTA_{acute} = ECA_{acute} * ECA $multiplier_{acute_{99}}$ (from Table 1 or as calculated above)

$LTA_{chronic}$ = $ECA_{chronic}$ * ECA $multiplier_{chronic_{99}}$ (from Table 1 or as calculated above)

Step 4: Select the lowest (most limiting) of the *LTA*s for the pollutant derived in *Step 3*.

Step 5: Calculate water quality-based effluent limitations (an *average monthly effluent limitation, AMEL, and a *maximum daily effluent limitation, MDEL) by multiplying the most limiting *LTA* (as selected in *Step 4*) with a factor (multiplier) that adjusts for the averaging periods and exceedance frequencies of the criteria/objectives and the effluent limitations, and the effluent monitoring frequency as follows:

$AMEL_{aquatic\ life}$ = *LTA* * AMEL $multiplier_{95}$ (from Table 2 or as calculated below)
$MDEL_{aquatic\ life}$ = *LTA* * MDEL $multiplier_{99}$ (from Table 2 or as calculated below)

The AMEL and MDEL multipliers shall be calculated as described below, or shall be found in Table 2 using the previously calculated *CV* and the monthly sampling frequency (*n*) of the pollutant in the effluent. If the sampling frequency is four times a month or less, *n* shall be set equal to 4. For this method only, maximum daily effluent limitations shall be used for publicly-owned treatment works (POTWs) in place of average weekly limitations.

AMEL and MDEL Multipliers

AMEL $multiplier_{95}$ = $e^{(z\sigma_n - 0.5\sigma_n^2)}$

Where σ_n = $[ln(CV^2/n + 1)]^{0.5}$
σ_n^2 = $ln(CV^2/n + 1)$
z = 1.645 for 95th percentile probability basis
n = number of samples per month

MDEL $multiplier_{99}$ = $e^{(z\sigma - 0.5\sigma^2)}$

Where σ = $[ln(CV^2 + 1)]^{0.5}$
σ^2 = $ln(CV^2 + 1)$
z = 2.326 for 99th percentile probability basis

Step 6: For the applicable human health criterion/objective, set the AMEL equal to the *ECA* (from *Step 2*).

$AMEL_{human\ health}$ = ECA

To calculate the MDEL for a human health criterion/objective, multiply the *ECA* by the ratio of the MDEL multiplier to the AMEL multiplier.

Table 2. Long-Term Average (LTA) Multipliers for Calculating Effluent Limitations

Coefficient of Variation	MDEL Multiplier	AMEL Multiplier			MDEL/AMEL Multiplier		
	99th Percentile Occurrence Probability	95th Percentile Occurrence Probability			MDEL = 99th Percentile AMEL = 95th Percentile Occurrence Probability		
(CV)		n = 4	n = 8	n = 30	n = 4	n = 8	n = 30
0.1	1.25	1.08	1.06	1.03	1.16	1.18	1.22
0.2	1.55	1.17	1.12	1.06	1.33	1.39	1.46
0.3	1.90	1.26	1.18	1.09	1.50	1.60	1.74
0.4	2.27	1.36	1.25	1.12	1.67	1.82	2.02
0.5	2.68	1.45	1.31	1.16	1.84	2.04	2.32
0.6	3.11	1.55	1.38	1.19	2.01	2.25	2.62
0.7	3.56	1.65	1.45	1.22	2.16	2.45	2.91
0.8	4.01	1.75	1.52	1.26	2.29	2.64	3.19
0.9	4.46	1.85	1.59	1.29	2.41	2.81	3.45
1.0	4.90	1.95	1.66	1.33	2.52	2.96	3.70
1.1	5.34	2.04	1.73	1.36	2.62	3.09	3.93
1.2	5.76	2.13	1.80	1.39	2.70	3.20	4.13
1.3	6.17	2.23	1.87	1.43	2.77	3.30	4.31
1.4	6.56	2.31	1.94	1.47	2.83	3.39	4.47
1.5	6.93	2.40	2.00	1.50	2.89	3.46	4.62
1.6	7.29	2.48	2.07	1.54	2.93	3.52	4.74
1.7	7.63	2.56	2.14	1.57	2.98	3.57	4.85
1.8	7.95	2.64	2.20	1.61	3.01	3.61	4.94
1.9	8.26	2.71	2.27	1.64	3.05	3.65	5.02
2.0	8.55	2.78	2.33	1.68	3.07	3.67	5.09

Notes:
n = monthly sampling frequency of the effluent concentration data.

Table 2 continued.

Coefficient of Variation	MDEL Multiplier	AMEL Multiplier			MDEL/AMEL Multiplier		
	99th Percentile Occurrence Probability	95th Percentile Occurrence Probability			MDEL = 99th Percentile AMEL = 95th Percentile Occurrence Probability		
(CV)		n = 4	n = 8	n = 30	n = 4	n = 8	n = 30
2.1	8.83	2.85	2.39	1.72	3.10	3.70	5.14
2.2	9.09	2.91	2.45	1.75	3.12	3.72	5.19
2.3	9.34	2.97	2.50	1.79	3.15	3.73	5.22
2.4	9.58	3.03	2.56	1.82	3.17	3.74	5.25
2.5	9.81	3.08	2.61	1.86	3.18	3.75	5.27
2.6	10.0	3.13	2.67	1.90	3.20	3.76	5.29
2.7	10.2	3.18	2.72	1.93	3.22	3.76	5.30
2.8	10.4	3.23	2.77	1.97	3.23	3.77	5.30
2.9	10.6	3.27	2.82	2.00	3.25	3.77	5.30
3.0	10.8	3.31	2.86	2.04	3.26	3.77	5.30
3.1	11.0	3.35	2.91	2.07	3.27	3.77	5.29
3.2	11.1	3.38	2.95	2.11	3.29	3.77	5.28
3.3	11.3	3.42	2.99	2.14	3.30	3.77	5.27
3.4	11.4	3.45	3.03	2.17	3.31	3.77	5.25
3.5	11.6	3.48	3.07	2.21	3.32	3.77	5.24
3.6	11.7	3.51	3.10	2.24	3.33	3.76	5.22
3.7	11.8	3.53	3.14	2.27	3.34	3.76	5.20
3.8	11.9	3.56	3.17	2.30	3.35	3.76	5.18
3.9	12.1	3.58	3.21	2.34	3.36	3.76	5.16
4.0	12.16	3.60	3.24	2.37	3.37	3.76	5.14

Notes:
n = monthly sampling frequency of the effluent concentration data.

MDEL/AMEL multiplier = MDEL multiplier$_{99}$ ÷ AMEL multiplier$_{95}$

$MDEL_{human\ health}$ = ECA * MDEL/AMEL multiplier

Step 7: Identify the lower of (1) the AMEL and MDEL calculated based on the aquatic life criteria/objectives, and (2) the AMEL and MDEL calculated based on the human health criterion/objective.

C. Apply a *dynamic model, approved by the RWQCB, where sufficient effluent and receiving water data exist; or

D. Establish effluent limitations that consider intake water pollutants according to section 1.4.4.

The RWQCB shall impose more restrictive water quality-based effluent limitations (e.g., discharge prohibitions established in accordance with Water Code Section 13243) where necessary for the protection of beneficial uses or where otherwise required by law.[7] Seasonal effluent limitations may be established, where appropriate (such as in applying translators and mixing zones/dilution credits). Any significant change in effluent quantity or quality shall be cause for reevaluation of effluent limitations.

Regardless of which method is used for deriving water quality-based effluent limitations, the calculated water quality-based effluent limitations shall be compared to the technology-based effluent limitations for the pollutant, and the most protective of the two types of limitations shall be included in the permit.

Effluent limitations shall apply to the total effluent of a waste discharge at the end-of-pipe, except in the rare situations where it is impractical or infeasible (e.g., where the final discharge point is inaccessible, or the pollutants are so diluted by cooling water as to make monitoring impractical, or interferences among pollutants make analysis infeasible). In these cases, some effluent limitations and monitoring requirements for the discharge may be modified to apply to internal waste streams instead, provided that the permit fact sheet fully states the circumstances for allowing this to occur and the permit also contains the unmodified effluent limitations (see 40 CFR 122.45(h), revised as of July 1, 1996).

For pollutants that are so diluted by cooling water as to make monitoring impractical, effluent limitations for internal waste streams shall be based on the same averaging periods as the unmodified effluent limitations and shall be calculated as follows:

[7] For example, to implement the State and federal antidegradation policies, and the federal antibacksliding requirements.

$IL = EL + (EL - CC) * CF/IF$

$IL = EL + (EL - CC) * (EF - IF)/IF$

where IL = the limitation for the internal waste stream;
EL = the unmodified effluent limitation;
CC = the concentration of the pollutant in the cooling water;
CF = the cooling water flow, which is equal to the effluent flow minus the internal waste stream flow;
IF = the internal waste stream flow; and
EF = the effluent flow.

These equations do not apply when intake water credits (as described in section 1.4.4) are being provided.

1.4.1 Translators for Metals and Selenium

To derive total recoverable effluent limitations for aquatic life metals and selenium criteria/objectives that are expressed in the dissolved form, a translator first must be applied to the criterion/objective to express it as total recoverable. The translator shall be the U.S. EPA conversion factor (see Appendix 3) that applies to the dissolved aquatic life metals criterion as specified in the CTR (i.e., the dissolved criterion/objective would be divided by the applicable U.S. EPA conversion factor to calculate a total recoverable criterion) unless:

A. the discharger, in the permit application, (1) commits to (a) completing a defensible site-specific translator study and (b) proposing a dissolved to total recoverable translator to the RWQCB, and (2) describes the method(s) to be used in developing the translator; and

B. the discharger, within a time period specified by the RWQCB not exceeding two years from the date of issuance/reissuance of the permit, submits to the RWQCB (1) the proposed translator, and (2) all data and calculations related to its derivation.

Site-specific translators can be developed from field data by either direct determination of the fraction dissolved, or by development of a site-specific partition coefficient that relates the fraction dissolved to ambient background conditions such as pH, suspended load, or organic carbon. The fraction of metal that is dissolved in a water body can vary depending on when and where measurements are taken. A site-specific translator must (1) account for spatial and/or seasonal variability in areas of the water body that are affected by the discharger's effluent and (2) protect against toxic effects during critical conditions. The translator shall be derived using the *median of data for translation of chronic criteria and the *90th percentile of observed data for translation of acute criteria. If systematic seasonal variation in the translator is demonstrated, seasonal effluent limitations may be justified. If a spatial gradient in the translator is demonstrated, the highest translator value should be used unless the permit allows for a mixing zone (in accordance with section 1.4.2), in which case measurements should be taken outside the mixing zone. The site-specific study plan (including sampling design) must be approved by the RWQCB, after consultation with the California Department of Fish and Game, prior to conducting the study. Translator studies may be conducted by one or more dischargers

discharging to the same receiving water body, as described in the permit application, subject to approval by the RWQCB. The planning and undertaking of the study may follow the guidelines presented in Appendix 5, as applicable.

Alternatively, the RWQCB may consider applying a previously approved site-specific translator or translator based on a study completed prior to the adoption of this Policy if the RWQCB believes the translator adequately reflects existing conditions (including spatial and/or seasonal variability) in the areas of the water body affected by the discharger's effluent.

While a translator study is being conducted, a final effluent limitation based on the applicable U.S. EPA conversion factor shall be included in the provisions of the permit and interim requirements shall be established (in accordance with section 2.2.2). An interim deadline to submit the results of the study shall be specified by the RWQCB, and shall not exceed two years from the date of issuance/reissuance of the permit. Once the translator is developed by the discharger(s) and approved by the RWQCB, the RWQCB shall reopen the permit and a new effluent limitation shall be calculated using a method described in section 1.4 after adjusting the dissolved metal or selenium criterion/objective by dividing it by the translator. In the event a translator study is not completed within the specified time, the U.S. EPA conversion factor-based effluent limitation in the provisions of the permit shall become effective as a default limitation.

1.4.2 Mixing Zones and Dilution Credits

With the exception of effluent limitations derived from TMDLs, in establishing and determining compliance with effluent limitations for applicable human health, acute aquatic life, or chronic aquatic life priority pollutant criteria/objectives or the toxicity objective for aquatic life protection in a RWQCB basin plan, the RWQCB may grant *mixing zones and *dilution credits to dischargers in accordance with the provisions of this section. To the extent permitted by applicable law, mixing zones may be considered for TMDL-derived effluent limitations. Effluent limitations based on a TMDL shall meet the mixing zone conditions specified in section 1.4.2.2.A.

The applicable priority pollutant criteria and objectives are to be met throughout a water body except within any mixing zone granted by a RWQCB. The allowance of mixing zones is discretionary and shall be determined on a discharge-by-discharge basis. A RWQCB may consider allowing mixing zones and dilution credits only for discharges with a physically identifiable point of discharge that are regulated through an NPDES permit issued by the RWQCB.

1.4.2.1 Dilution Credits

The dilution credit, D, is a numerical value associated with the mixing zone that accounts for the receiving water entrained into the discharge. The dilution credit is a value used in the calculation of effluent limitations (described in section 1.4). Dilution credits may be limited or denied on a pollutant-by-pollutant basis, which may result in a dilution credit for all, some, or no priority pollutants in a discharge.

Before establishing a mixing zone and a dilution credit for a discharge, it must first be determined if, and how much (if any), receiving water is available to dilute the discharge. In determining the appropriate available receiving water flow, the RWQCBs may take into account actual and seasonal variations of the receiving water and the effluent. For example, a RWQCB may prohibit mixing zones during seasonal low flows and allow them during seasonal high flows. However, for year-round mixing zones, the mixing zone and dilution credit shall be determined using the parameters specified in Table 3.

Table 3. Effluent and Receiving Water Flows for Calculating Dilution Ratios

In calculating a dilution ratio for:	**Use the critical receiving water flow[8] of:**	**Use the discharged effluent flow of:**
Acute aquatic life criteria/objectives	*1Q10	*maximum daily flow during period of discharge
Chronic aquatic life criteria/objectives Chronic toxicity objective for aquatic life[9]	*7Q10	*four-day average of daily maximum flows during period of discharge
Human health criteria/objectives	*harmonic mean	*long-term arithmetic mean flow during period of discharge

The approach to making a mixing zone determination also depends on whether a discharge is *completely-mixed or *incompletely-mixed with the receiving water as discussed below.

Completely-Mixed Discharges

For completely-mixed discharges, as determined by the RWQCB and based on information provided by the discharger, the amount of receiving water available to dilute the effluent shall be determined by calculating the *dilution ratio (i.e., the critical receiving water flow divided by the effluent flow) using the appropriate flows in Table 3. In no case shall the RWQCB grant a dilution credit that is greater than the calculated dilution ratio. The dilution credit may be set equal to the dilution ratio only if the site-specific conditions concerning the discharge and the receiving water do not indicate that a smaller dilution credit is necessary to protect beneficial uses and meet the conditions of this Policy. If, however, dilution ratios that are calculated using the Table 3 parameters are inappropriate for use due to site-specific issues, the mixing zone and dilution credit shall be determined using site-specific information and procedures detailed for incompletely-mixed discharges.

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[8] U.S. EPA's *biologically-based receiving water flows may be used in place of these critical receiving water flows where sufficient data are available.

[9] These objectives are included in RWQCB basin plans and may address both chronic and acute toxicity to aquatic life. The flows in Table 3 apply to the chronic component of the objective.

Incompletely-Mixed Discharges

Dilution credits and mixing zones for incompletely-mixed discharges shall be considered by the RWQCB only after the discharger has completed an independent mixing zone study and demonstrated to the satisfaction of the RWQCB that a dilution credit is appropriate. Mixing zone studies may include, but are not limited to, tracer studies, dye studies, modelling studies, and monitoring upstream and downstream of the discharge that characterize the extent of actual dilution. These studies may be conducted in accordance with the procedures outlined in Appendix 5.

1.4.2.2 Mixing Zone Conditions

A mixing zone shall be as small as practicable. The following conditions must be met in allowing a mixing zone:

A. A mixing zone shall not:

(1) compromise the integrity of the entire water body;
(2) cause *acutely toxic conditions to aquatic life passing through the mixing zone;
(3) restrict the passage of aquatic life;
(4) adversely impact biologically sensitive or critical habitats, including, but not limited to, habitat of species listed under federal or State endangered species laws;
(5) produce undesirable or nuisance aquatic life;
(6) result in floating debris, oil, or scum;
(7) produce objectionable color, odor, taste, or turbidity;
(8) cause *objectionable bottom deposits;
(9) cause nuisance;
(10) dominate the receiving water body or overlap a mixing zone from different outfalls; or
(11) be allowed at or near any drinking water intake. A mixing zone is not a *source of drinking water. To the extent of any conflict between this determination and the Sources of Drinking Water Policy (SWRCB Resolution No. 88-63), this determination supersedes the provisions of that policy.

B. The RWQCB shall deny or significantly limit a mixing zone and dilution credit as necessary to protect beneficial uses, meet the conditions of this Policy, or comply with other regulatory requirements. Such situations may exist based upon the quality of the discharge, hydraulics of the water body, or the overall discharge environment (including water column chemistry, organism health, and potential for bioaccumulation). For example, in determining the extent of or whether to allow a mixing zone and dilution credit, the RWQCB shall consider the presence of pollutants in the discharge that are *carcinogenic, *mutagenic, *teratogenic, *persistent, *bioaccumulative, or attractive to aquatic organisms. In another example, the RWQCB also shall consider, if necessary to protect the beneficial uses, the level of flushing in water bodies such as lakes, reservoirs, enclosed bays, estuaries, or other water body types

where pollutants may not be readily flushed through the system. In the case of multiple mixing zones, proximity to other outfalls shall be carefully considered to protect the beneficial uses.

If a RWQCB allows a mixing zone and dilution credit, the permit shall specify the method by which the mixing zone was derived, the dilution credit granted, and the point(s) in the receiving water where the applicable criteria/objectives must be met. The application for the permit shall include, to the extent feasible, the information needed by the RWQCB to make a determination on allowing a mixing zone, including the calculations for deriving the appropriate receiving water and effluent flows, and/or the results of a mixing zone study. If the results of the mixing zone study are unavailable by the time of permit issuance/reissuance, the RWQCB may establish interim requirements in accordance with section 2.2.2.

1.4.3 Ambient Background Concentrations

Ambient background concentration, B, of a priority pollutant in the receiving water body shall be calculated on a pollutant-by-pollutant basis and on a discharge-by-discharge or water body-by-water body basis at the RWQCB's discretion. The ambient background concentration shall be the observed maximum ambient water column concentration in accordance with section 1.4.3.1 or the *arithmetic mean of observed ambient water concentrations in accordance with section 1.4.3.2 where these sections are specifically referenced in this Policy (i.e., sections 1.3 and 1.4).

1.4.3.1 Ambient Background Concentration as an Observed Maximum

Step 1: Identify all available, applicable ambient background data for the pollutant in accordance with section 1.2. If possible, preference should be given to ambient water column concentrations measured immediately upstream or near the discharge, but not within an allowed mixing zone for the discharge. The RWQCB shall have discretion to consider if any samples are invalid for use as applicable data due to evidence that the sample has been erroneously reported or the sample is not representative of the ambient receiving water column that will mix with the discharge. For example, the RWQCB shall have discretion to consider samples to be invalid that have been taken during peak flows of significant storm events.

Step 2: If all samples are below the reported detection limits, the ambient background concentration shall be set equal to the lowest of the individual reported detection limits. If any sample is reported with a detected concentration, as either measured or estimated by the laboratory, the ambient background concentration shall be set equal to the maximum of the individual reported measured or estimated concentrations.

1.4.3.2 Ambient Background Concentration as an Arithmetic Mean

Step 1: Identify all available, applicable ambient background data for the pollutant in accordance with section 1.2. If possible, preference should be given to ambient water column concentrations measured immediately upstream or near the discharge, but not within an allowed mixing zone for

the discharge. The RWQCB shall have discretion to consider if any samples are invalid for use as applicable data due to evidence that the sample has been erroneously reported or the sample is not representative of the ambient receiving water column that will mix with the discharge.

Step 2: If all samples are below the reported detection limits, the ambient background concentration shall be set equal to the lowest of the individual reported detection limits. If any sample is reported with a detected concentration, as either measured or estimated by the laboratory, the ambient background concentration shall be set equal to the arithmetic mean of the individual reported measured or estimated concentrations. The arithmetic mean shall be calculated using the reported detection limits for samples that are reported below detection limits.

1.4.4 Intake Water Credits

A RWQCB may consider priority pollutants in intake water on a pollutant-by-pollutant and discharge-by-discharge basis when establishing water quality-based effluent limitations, provided that the discharger has demonstrated to the satisfaction of the RWQCB that the following conditions are met:

(1) The observed maximum ambient background concentration, as determined in section 1.4.3.1, and the intake water concentration of the pollutant exceed the most stringent applicable criterion/objective for that pollutant;

(2) The intake water credits provided are consistent with any TMDL applicable to the discharge that has been approved by the RWQCB, SWRCB, and U.S. EPA;

(3) The intake water is from the same water body as the receiving water body. The discharger may demonstrate this condition by showing that:

  (a) the ambient background concentration of the pollutant in the receiving water, excluding any amount of the pollutant in the facility's discharge, is similar to that of the intake water;

  (b) there is a direct hydrological connection between the intake and discharge points;

  (c) the water quality characteristics are similar in the intake and receiving waters; and

  (d) the intake water pollutant would have reached the vicinity of the discharge point in the receiving water within a reasonable period of time and with the same effect had it not been diverted by the discharger.

  The RWQCB may also consider other factors when determining whether the intake water is from the same water body as the receiving water body;

(4) The facility does not alter the intake water pollutant chemically or physically in a manner that adversely affects water quality and beneficial uses; and

(5) The timing and location of the discharge does not cause adverse effects on water quality and beneficial uses that would not occur if the intake water pollutant had been left in the receiving water body.

Where the above conditions are met, the RWQCB may establish effluent limitations allowing the facility to discharge a mass and concentration of the intake water pollutant that is no greater than the mass and concentration found in the facility's intake water. A discharger may add mass of the pollutant to its waste stream if an equal or greater mass is removed prior to discharge, so there is no net addition of the pollutant in the discharge compared to the intake water. Where proper operation and maintenance of a facility's treatment system results in the removal of an intake water pollutant, the RWQCB may establish limitations that reflect the lower mass and concentration of the pollutant achieved by such treatment.

Where intake water for a facility is provided by a municipal water supply system and the supplier provides treatment of the raw water that removes an intake water pollutant, the concentration of the intake water pollutant shall be determined at the point where the water enters the water supplier's distribution system.

Where a facility discharges pollutants from multiple sources that originate from the receiving water body and from other water bodies, the RWQCB may derive an effluent limitation reflecting the flow-weighted amount of each source of the pollutant provided that adequate monitoring to determine compliance can be established and is included in the permit. When calculating the flow-weighted effluent limitation, the pollutant from the receiving water body shall be assumed to have a concentration that is no greater than the concentration in the facility's intake water; the same pollutant from other sources shall be assumed to have a concentration that is no greater than the most stringent applicable criterion/objective.

The permit shall specify how compliance with mass- and concentration-based limitations for the intake water pollutant will be assessed. This may be done by basing the effluent limitation on ambient background concentration data. Alternatively, the RWQCB may determine compliance by simultaneously monitoring the pollutant concentrations in the intake water and in the effluent. This monitoring may be supplemented by monitoring internal waste streams or by a RWQCB evaluation of the use of *best management practices.

2.DE TERMINING COMPLIANCE WITH PRIORITY POLLUTANT CRITERIA/OBJECTIVES AND WATER QUALITY-BASED EFFLUENT LIMITATIONS FOR PRIORITY POLLUTANT CRITERIA/OBJECTIVES

Compliance with priority pollutant criteria/objectives and water quality-based effluent limitations established pursuant to section 1 shall be determined according to the following provisions for (1) compliance schedules (section 2.1), (2) interim requirements (section 2.2), (3) monitoring requirements (section 2.3), and (4) reporting requirements including compliance determinations (section 2.4). In determining compliance with effluent limitations based on intake water credits, only the monitoring requirements (section 2.3) and the reporting requirements (section 2.4) apply. In determining compliance with effluent limitations derived from TMDLs, only the compliance schedule provisions (section 2.1) apply.

2.1 Compliance Schedules

Based on an *existing discharger's request and demonstration that it is *infeasible for the discharger to achieve immediate compliance with a CTR criterion[10], or with an effluent limitation based on a CTR criterion, the RWQCB may establish a compliance schedule in an NPDES permit. Compliance schedules shall not be allowed in permits for *new dischargers.

A schedule of compliance shall include a series of required actions to be undertaken for the purpose of achieving a CTR criterion and/or effluent limitations based on a CTR criterion. These actions shall demonstrate reasonable progress toward the attainment of a CTR criterion and/or effluent limitations. The compliance schedule shall include a schedule for completion that reflects a realistic assessment of the shortest practicable time required to perform each task. The compliance schedule shall contain a final compliance date based on the shortest practicable time required to achieve compliance. The deadlines to complete each action in the compliance schedule shall be specified in the NPDES permit and shall be accompanied by interim requirements as described in section 2.2.1. When a compliance schedule exceeds one year from the date of permit issuance, interim limitations with specific compliance dates (as described in section 2.2.1) shall be included in the NPDES permit. If the final compliance date extends beyond the permit term, the final compliance date and supporting explanation shall be included in the permit findings.

The discharger shall submit to the RWQCB the following justification before compliance schedules may be authorized in a permit: (a) documentation that diligent efforts have been made to quantify pollutant levels in the discharge and the sources of the pollutant in the waste stream, and the results of those efforts; (b) documentation of source control and/or pollution minimization efforts currently underway or completed; (c) a proposed schedule for additional or future source control measures, *pollutant minimization actions, or waste treatment (i.e., facility upgrades); and (d) a demonstration that the proposed schedule is as short as practicable.

The schedule of compliance for point source dischargers in an NPDES permit shall be as short as practicable but in no case exceed the following:

A. Up to five years from the date of permit issuance, reissuance, or modification to complete actions (such as pollutant minimization or facility upgrades) necessary to comply with CTR criterion-based effluent limitations that are derived with or without a TMDL. Such actions shall include the development and adoption of a site-specific objective, if appropriate, as provided in section 5.2.

B. Up to 15 years from the effective date of this Policy to develop and adopt a TMDL, and accompanying Waste Load Allocations (WLAs) and Load Allocations (LAs), as described in section 2.1.1, below.

In no case (unless an exception has been granted in accordance with section 5.3) shall a compliance schedule for these dischargers exceed, from the effective date of this Policy: (a) 10 years to establish and comply with CTR criterion-based effluent limitations; or (b) 20 years

[10] CTR criteria, for purposes of this section, exclude NTR criteria.

to develop and adopt a TMDL, and to establish and comply with WLAs derived from a TMDL for a CTR criterion (i.e., up to 15 years to complete the TMDL and up to five years to comply with a TMDL-derived effluent limitation).

2.1.1 TMDL-Based Compliance Schedule

The compliance schedule provisions for the development and adoption of a TMDL only apply when: (a) the discharger requests and demonstrates that it is *infeasible for the discharger to achieve immediate compliance with a CTR criterion, or with an effluent limitation based on a CTR criterion; and (b) the discharger has made appropriate commitments to support and expedite the development of the TMDL. In determining appropriate commitments, the RWQCB should consider the discharge's contribution to current loadings and the discharger's ability to participate in TMDL development.

For *bioaccumulative priority pollutants for which the receiving water has been included on the CWA Section 303(d) list, the RWQCB should consider whether the mass loading of the bioaccumulative pollutant(s) should be limited to representative, current levels pending TMDL development in order to implement the applicable water quality standard.

2.2 Interim Requirements

If a compliance schedule is allowed (in accordance with section 2.1) or a schedule is allowed to collect and provide data needed to establish water quality-based effluent limitations for a CTR criterion (in accordance with provisions in section 1), interim requirements shall be included in an NPDES permit.

2.2.1 Interim Requirements Under a Compliance Schedule

If a compliance schedule is granted (in accordance with section 2.1), the RWQCB shall establish interim requirements and dates for their achievement in the NPDES permit. If the compliance schedule exceeds one year, the RWQCB shall establish interim numeric limitations for the priority pollutant in the permit and may also impose interim requirements to control the pollutant, such as *pollutant minimization and source control measures. Numeric interim limitations for the pollutant must be based on current treatment facility performance or on existing permit limitations, whichever is more stringent. If the existing permit limitations are more stringent, and the discharger is not in compliance with those limitations, the noncompliance under the existing permit must be addressed through appropriate enforcement action before the permit can be reissued, unless antibacksliding provisions are met.

There shall be no more than one year between interim dates. The interim requirements shall state that the discharger must notify the RWQCB, in writing, no later than 14 days following each interim date, of its compliance or noncompliance with the interim requirements.

If the compliance schedule is within the term of the permit, the final effluent limitations shall be included in the permit provisions. If the compliance schedule exceeds the length of the permit, the final effluent limitations shall be included in the permit findings. In the latter case, the findings shall include: (1) the water quality to be achieved; (2) the reason that a final water quality-based

effluent limitation is not being incorporated into the permit as an enforceable limitation at this time; (3) a statement that it is the intent of the RWQCB to include, in a subsequent permit revision, the final water quality-based effluent limitation as an enforceable limitation (based either on the CTR criterion directly or on future regulatory developments, such as TMDL or site-specific objective development). The permit findings shall also state the appropriate enforcement actions that may be taken by the RWQCB if interim limitations and requirements are not met.

2.2.2 Interim Requirements for Providing Data

The RWQCB may determine, based on a discharger's request and/or a demonstration of necessity, that it is appropriate to establish a schedule of interim requirements regarding the implementation of a CTR criterion. Such interim schedules may be established based on a consideration of time needed to collect sufficient data to: (1) determine whether effluent limitations are needed (as described in section 1.3); and (2) calculate effluent limitations (as described in section 1.4), including developing a site-specific translator (as described in section 1.4.1) and conducting a mixing zone study (as described in section 1.4.2).

If a discharger makes a successful demonstration, as determined by the RWQCB, that available data are insufficient, the permit provisions shall specify a schedule not to exceed three years from the effective date of this Policy[11] that contains interim requirements and dates for their achievement. There shall be no more than one year between interim dates. The interim requirements shall state that the discharger must notify the RWQCB, in writing, no later than 14 days following each interim date, of its compliance or noncompliance with the interim requirements (or must submit a progress report, if applicable). Additional requirements that are specific to two situations follow:

A. Insufficient Data to Determine if an Effluent Limitation for a CTR Criterion is Needed

The RWQCB shall not establish in the NPDES permit numeric interim limitations, and source control or *pollutant minimization measures, for the pollutant, but shall instead require the discharger to collect the needed data. These data requirements should be sufficient to contribute to the data needs for both sections 1.3 and 1.4. When the needed data have been provided in accordance with the interim requirements, the RWQCB shall determine, based on the data and the section 1.3 procedure, if water quality-based effluent limitations are necessary for the pollutant. If the RWQCB determines that effluent limitations are needed, the RWQCB shall calculate them, reopen the permit, and include the calculated effluent limitations in the permit provisions.

B. Insufficient Data to Calculate a Final Effluent Limitation for a CTR Criterion

The RWQCB shall establish in the NPDES permit numeric interim limitations, and may also establish other interim requirements such as requiring the discharger to implement *pollutant minimization and/or source control measures and participate in the activities necessary to develop final effluent limitations. Numeric interim limitations for the pollutant must be based on current treatment facility performance or on existing permit limitations, whichever is more

[11] Note that the schedule to submit a translator for approval by the RWQCB is up to two years from the date of issuance/reissuance of the permit (as described in section 1.4.1).

stringent. If the existing permit limitations are more stringent, and the discharger is not in compliance with those limitations, the noncompliance under the existing permit must be addressed through appropriate enforcement action before the permit can be reissued, unless antibacksliding provisions are met.

Permit findings shall also state the appropriate enforcement actions that may be taken by the RWQCB if interim limitations and requirements are not met. Except as provided in section 1.4.1 (for a translator study), the permit provisions shall not include a final effluent limitation, but the permit findings shall include: (1) the water quality to be achieved; (2) the reason that a final water quality-based effluent limitation is not being incorporated into the permit as an enforceable limitation at this time; (3) a statement that it is the intent of the RWQCB to include the final water quality-based effluent limitation as an enforceable limitation in a subsequent permit revision, and that the final water quality-based effluent limitation will be based either on the water quality criterion or on future regulatory developments; and (4) a schedule for development of a final water quality-based effluent limitation. When interim requirements have been completed, the RWQCB shall calculate final water quality-based effluent limitations for that pollutant based on the collected data, reopen the permit, and include the final effluent limitations in the permit provisions. Once final limitations become effective, the interim limitations will no longer apply.

2.3 Monitoring Requirements

The RWQCB shall require dischargers to conduct self-monitoring programs and shall clearly state in all permits the objective and purpose of the monitoring. Furthermore, the RWQCB shall determine, and specify under the monitoring and reporting requirements, the sampling parameters, monitoring frequencies, locations, and analytical methods to be used. To evaluate compliance with effluent limitations, effluent and ambient monitoring should occur within a brief enough period to be able to evaluate the effect of the effluent on the ambient water quality. All data shall be reported in accordance with section 2.4. Options for analytical methods are:

(1) those methods listed in Appendix 4 and described in Tables 1A, 1B, 1C, 1D, and 1E of 40 CFR 136.3 (revised as of May 14, 1999); or alternate test procedures for individual discharges that have been approved by the U.S. EPA Regional Administrator pursuant to 40 CFR 136.4 (a) through (c), inclusive, and 40 CFR 136.5 (a) through (d), inclusive (revised as of May 14, 1999); or

(2) where no methods are specified for a given pollutant in the tables described in (1) above, methods approved by the SWRCB or RWQCB.

Laboratories analyzing monitoring samples shall be certified by the Department of Health Services, in accordance with the provision of Water Code Section 13176, and must include quality assurance/quality control data with their reports.

Dischargers are also encouraged to submit monitoring data in electronic formats approved by the SWRCB or RWQCB.

Furthermore, it is the policy of the SWRCB that individual permit monitoring complement and be

coordinated with water body, watershed, and regional monitoring programs to the extent practicable.

2.4 Reporting Requirements

The discharger shall submit to the RWQCB reports necessary to determine compliance with effluent limitations for priority pollutants in permits. The reports shall comply with the requirements of sections 2.4.1 through 2.4.4.

2.4.1 Reporting Levels

The RWQCB shall require in the permit that the discharger shall report with each sample result:

1. The applicable *Minimum Level (ML) (selected from Appendix 4 in accordance with section 2.4.2 or established in accordance with section 2.4.3); this ML is the "reported ML"; and

2. The laboratory's current *Method Detection Limit (MDL), as determined by the procedure found in 40 CFR 136 (revised as of May 14, 1999).

2.4.2 Selection and Use of Appropriate ML Value

ML Selection: When there is more than one ML value for a given substance, the RWQCB shall cite for inclusion in the permit all ML values, and their associated analytical methods, listed in Appendix 4 that are below the calculated effluent limitation. The discharger may select any one of those cited analytical methods for compliance determination. If no ML value is below the effluent limitation, then the RWQCB shall select the lowest ML value, and its associated analytical method, listed in Appendix 4 for inclusion in the permit.

ML Usage: The ML value in Appendix 4 represents the lowest quantifiable concentration in a sample based on the proper application of all method-based analytical procedures and the absence of any matrix interferences. Assuming that all method-specific analytical steps are followed, the ML value will also represent, after the appropriate application of method-specific factors, the lowest standard in the calibration curve for that specific analytical technique. Common analytical practices sometimes require different treatment of the sample relative to calibration standards. Some examples are given below:

Substance or Grouping	Method-Specified Treatment	Most Common Method-Specific Factor(s)
Volatile organic	No differential treatment	1
Semi-Volatile organic	Samples concentrated by extraction	1000
Metals	Samples diluted or concentrated	½, 2, and 4
Pesticides	Samples concentrated by extraction	100

Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied in the computation of the reporting limit. Application of such factors will alter the

reported ML (as described in section 2.4.1).

Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the discharger to use analytical data derived from *extrapolation* beyond the lowest point of the calibration curve. The discharger's laboratory(ies) may, as allowed for by the rules governing alterations to ML values in section 2.4.3 below, employ a calibration standard lower than the ML value in Appendix 4.

2.4.3 Deviation from MLs Listed in Appendix 4

The RWQCB, in consultation with the SWRCB's Quality Assurance Program, shall establish an ML that is not contained in Appendix 4 to be included in the discharger's permit in any of the following situations:

1. When the pollutant under consideration is not included in Appendix 4.

2. When the discharger and the RWQCB agree to include in the permit a test method that is more sensitive than those specified in 40 CFR 136 (revised as of May 14, 1999).

3. When a discharger agrees to use an ML that is lower than those listed in Appendix 4.

4. When a discharger demonstrates that the calibration standard matrix is sufficiently different from that used to establish the ML in Appendix 4 and proposes an appropriate ML for their matrix.

5. When the discharger uses a method whose quantification practices are not consistent with the definition of an ML. Examples of such methods are the U.S. EPA-approved method 1613 for dioxins and furans, method 1624 for volatile organic substances, and method 1625 for semi-volatile organic substances. In such cases, the discharger, the RWQCB, and the SWRCB shall agree on a lowest quantifiable limit and that limit will substitute for the ML for reporting and compliance determination purposes.

2.4.4 Reporting Protocols

The discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

1. Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

2. Sample results less than the reported ML, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The *estimated chemical concentration of the sample shall also be reported.

For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (± a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

3. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.

2.4.5 Compliance Determination

Compliance with effluent limitations shall be determined as follows:

1. Dischargers shall be deemed out of compliance with an effluent limitation if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported ML.

2. Dischargers shall be required to conduct a Pollutant Minimization Program (PMP) in accordance with section 2.4.5.1 when there is evidence (e.g., sample results reported as DNQ when the effluent limitation is less than the MDL, sample results from analytical methods more sensitive than those methods included in the permit in accordance with sections 2.4.2 or 2.4.3 above, presence of whole effluent toxicity, health advisories for fish consumption, results of benthic or aquatic organism tissue sampling) that the priority pollutant is present in the effluent above an effluent limitation and either:

   a. A sample result is reported as DNQ and the effluent limitation is less than the reported ML; or

   b. A sample result is reported as ND and the effluent limitation is less than the MDL.

   RWQCBs may include special provisions in the permit to require the gathering of evidence to determine whether the constituent of concern is present in the effluent at levels above a calculated effluent limitation.

When determining compliance with an AMEL and more than one sample result is available in a month, the discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of DNQ or ND. In those cases, the discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

1. The data set shall be ranked from low to high, reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

2. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both

of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

If a sample result, or the arithmetic mean or median of multiple sample results, is below the reported ML, and there is evidence that the priority pollutant is present in the effluent above an effluent limitation and the discharger conducts a PMP (as described in section 2.4.5.1), the discharger shall not be deemed out of compliance.

2.4.5.1 Pollutant Minimization Program

The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through *pollutant minimization (control) strategies, including *pollution prevention measures as appropriate[12], to maintain the effluent concentration at or below the water quality-based effluent limitation. The RWQCB may consider cost-effectiveness when establishing the requirements of a PMP. The program shall include, but not be limited to, the following actions and submittals acceptable to the RWQCB:

1. An annual review and semi-annual monitoring of potential sources of the reportable priority pollutant(s), which may include fish tissue monitoring and other bio-uptake sampling;

2. Quarterly monitoring for the reportable priority pollutant(s) in the influent to the wastewater treatment system;

3. Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable priority pollutant(s) in the effluent at or below the effluent limitation;

4. Implementation of appropriate cost-effective control measures for the reportable priority pollutant(s), consistent with the control strategy; and

5. An annual status report that shall be sent to the RWQCB including:

    a. All PMP monitoring results for the previous year;

    b. A list of potential sources of the reportable priority pollutant(s);

    c. A summary of all actions undertaken pursuant to the control strategy; and

    d. A description of actions to be taken in the following year.

The permit shall contain a reopener clause authorizing modifications, or revocation and reissuance of the permit, as a result of the detection of a reportable priority pollutant generated by special conditions included in the permit. These special conditions in the permit may be, but are

[12] Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted.

not limited to, fish tissue sampling, whole effluent toxicity tests, monitoring requirements on internal waste stream(s), and monitoring for surrogate parameters. Additional requirements may be included in the permit as a result of the special condition monitoring data.

The completion and implementation of a pollution prevention plan, required pursuant to Water Code Section 13263.3(d), shall be considered to fulfill the PMP requirements of this section.

3. 2,3,7,8-TCDD EQUIVALENTS

The CTR includes criteria for 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD). In addition to this compound, there are many congeners of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) that exhibit toxic effects similar to those of 2,3,7,8-TCDD. The U.S. EPA has published toxic equivalency factors (TEFs) for 17 of the congeners. The TEFs express the relative toxicities of the congeners compared to 2,3,7,8-TCDD (whose TEF equals 1.0). In June 1997, participants in a World Health Organization (WHO) expert meeting revised TEF values for 1,2,3,7,8-PentaCDD, OctaCDD, and OctaCDF. The current TEFs for the 17 congeners, which include the three revised values, are shown in Table 4:

Table 4. Toxic Equivalency Factors (TEFs) for 2,3,7,8-TCDD Equivalents

Congener	TEF
2,3,7,8-TetraCDD	1
1,2,3,7,8-PentaCDD	1.0
1,2,3,4,7,8-HexaCDD	0.1
1,2,3,6,7,8-HexaCDD	0.1
1,2,3,7,8,9-HexaCDD	0.1
1,2,3,4,6,7,8-HeptaCDD	0.01
OctaCDD	0.0001
2,3,7,8-TetraCDF	0.1
1,2,3,7,8-PentaCDF	0.05
2,3,4,7,8-PentaCDF	0.5
1,2,3,4,7,8-HexaCDF	0.1
1,2,3,6,7,8-HexaCDF	0.1
1,2,3,7,8,9-HexaCDF	0.1
2,3,4,6,7,8-HexaCDF	0.1
1,2,3,4,6,7,8-HeptaCDF	0.01
1,2,3,4,7,8,9-HeptaCDF	0.01
OctaCDF	0.0001

TEF Reference: Van den Berg, M., et al. (22 additional authors). 1998. Toxic Equivalency Factors (TEFs) for PCBs, PCDDs, PCDFs, for humans and wildlife. Environmental Health Perspectives 106(12):775-792.

Whether or not an effluent limitation is required for 2,3,7,8-TCDD in accordance with section 1.3 of this Policy, each RWQCB shall require (as described below) major and minor POTW and industrial dischargers in its region to conduct effluent monitoring for the 2,3,7,8-TCDD congeners listed above. The purpose of the monitoring is to assess the presence and amounts of the congeners being discharged to inland surface waters, enclosed bays, and estuaries for the development of a strategy to control these chemicals in a future multi-media approach.

Within one year of the effective date of this Policy, each RWQCB shall either (1) amend the NPDES permits, or (2) send a written request for the information pursuant to California Water Code Section 13267 or 13383, for NPDES permittees in their respective regions, requiring, for a period of three consecutive years from the date the permit is amended or the request is sent, that: (1) each major POTW and major industrial discharger monitor its effluent for the presence of the 17 congeners once during dry weather and once during wet weather each of the three years; and (2) each minor POTW and minor industrial discharger monitor its effluent for the presence of the 17 congeners once during dry weather and once during wet weather for one year during the three-year period.

The RWQCB should coordinate this region-wide monitoring to provide data that are consistent with the purpose of the provisions of this section to the extent possible. The RWQCB shall encourage public and private dischargers, and local governments, to develop a coordinated, cooperative regional monitoring program to gather this information.

The RWQCB shall require the discharger to report for each congener the analytical results of the effluent monitoring, including the quantifiable limit[13] and the MDL, and the measured or estimated concentration. In addition, the RWQCB shall require the discharger to multiply each measured or estimated congener concentration by its respective TEF value (presented above) and report the sum of these values. This information shall be submitted to the RWQCB as part of the discharger's self-monitoring reports, in accordance with section 2.3. The RWQCB shall, subsequently, submit the information to the SWRCB.

Based on the monitoring results, the RWQCB may, at its discretion, increase the monitoring requirement (e.g., increase sampling frequency) to further investigate frequent or significant detections of any congener. At the conclusion of the three-year monitoring period, the SWRCB and RWQCBs will assess the data (a total of six samples each from major POTWs and industrial dischargers, and a total of two samples each from minor POTWs and industrial dischargers), and determine whether further monitoring is necessary.

4. TOXICITY CONTROL PROVISIONS

This section establishes minimum toxicity control requirements for implementing the narrative toxicity objectives for aquatic life protection in RWQCB basin plans. These provisions are intended to supplement basin plan requirements and do not supersede existing RWQCB toxicity requirements.

[13] As determined by the procedure found in section 2.4.3, number 5.

Water Quality-Based Toxicity Control

A chronic toxicity effluent limitation is required in permits for all discharges that will cause, have reasonable potential to cause, or contribute to chronic toxicity in receiving waters.

To determine compliance with the chronic aquatic life toxicity objective in a RWQCB basin plan, or an effluent limitation based on the objective, the RWQCB shall require, in a permit or other appropriate order, the use of short-term chronic toxicity tests. At least three test species with approved test protocols shall be used to measure compliance with the toxicity objective. If possible, the test species shall include a vertebrate, an invertebrate, and an aquatic plant. After a screening period, monitoring may be reduced to the most sensitive species. Dilution and control waters should be obtained from an area unaffected by the discharge in the receiving waters. For rivers and streams, dilution water should be obtained immediately upstream of the wastewater outfall. Standard dilution water can be used if the above sources exhibit toxicity or if approved by the RWQCB. The sensitivity of the test organisms to a reference toxicant shall be determined concurrently with each bioassay and reported with the test results.

The tests contained in Appendix II, "Chapter IV. Compliance With Toxicity Limitations and Objectives", of the California Ocean Plan (amended March 20, 1997 and effective July 23, 1997) are incorporated by reference and one or more of these tests shall be used to measure toxicity in salt water. This incorporation-by-reference is prospective, including future changes to the incorporated provisions as the changes take effect. One or more of the tests in Table 5 shall be used to measure chronic toxicity in fresh water.

Table 5. Short-term Methods for Estimating Chronic Toxicity--Fresh Water

Species	Effect	Test duration (days)
fathead minnow (Pimephales promelas)	larval survival; growth	7
water flea (Ceriodaphnia dubia)	survival; number of young	6 to 8
alga (Selenastrum capricornutum)	growth rate	4

Toxicity Test Reference: U.S. EPA. 1994. Short-term methods for estimating the chronic toxicity of effluents and receiving waters to freshwater organisms. Third edition. U.S. EPA Environmental Monitoring Systems Laboratory, Cincinnati, Ohio. EPA/600/4-91-002.

Toxicity Reduction Requirements

If a discharge causes or contributes to chronic toxicity in a receiving water body, a *toxicity reduction evaluation (TRE) is required. Where multiple dischargers to the same water body are required to conduct TREs, the TREs may be coordinated with the approval of the RWQCB. The TRE shall include all reasonable steps to identify the source(s) of toxicity. Once the source of toxicity is identified, the discharger shall take all reasonable steps necessary to eliminate toxicity.

The following shall be incorporated into permits: (1) a requirement to conduct a TRE if repeated tests reveal toxicity as a result of the waste discharge; (2) a provision requiring a discharger to take all reasonable steps to control toxicity once the source of toxicity is identified; and (3) a statement that failure to conduct required toxicity tests or a TRE within a designated period shall result in the establishment of effluent limitations for chronic toxicity in a permit or appropriate enforcement action.

5. SPECIAL PROVISIONS

The following sections include provisions that address certain discharges and factors that could affect the application of other provisions in this Policy. They include: (1) nonpoint source discharges (section 5.1); (2) site-specific objectives (section 5.2); and (3) exceptions to the Policy provisions (section 5.3).

5.1 Nonpoint Source Discharges

It is the intent of the SWRCB, in adopting this Policy, that the implementation of the priority pollutant criteria/objectives and other requirements of this Policy for nonpoint source discharges shall be consistent with the State's "three-tiered approach" for nonpoint sources. The three tiers, listed in order of increasing stringency, are:

Tier 1. Self-determined implementation of management practices (such as BMPs).

Tier 2. Regulatory-based encouragement of BMPs (through, e.g., WDR waivers conditioned on BMP implementation or management agency agreements between the SWRCB and/or RWQCBs and other agencies with authority to enforce BMPs).

Tier 3. Effluent limitations and enforcement (through, e.g., WDRs, time schedule orders, cease and desist orders, and cleanup and abatement orders).

The RWQCBs may select the appropriate tier, or combination of tiers, to address nonpoint source discharges of priority pollutants. The SWRCB, in adopting this Policy, understands that nonpoint source pollution control can best be achieved through the cooperative efforts of the dischargers, other interested persons, and the SWRCB and RWQCBs.

5.2 Site-Specific Objectives

If a priority pollutant criterion or objective is inappropriate for a particular water body (i.e., it does not protect the beneficial uses or, based on site-specific conditions, a less stringent standard may be warranted), a water quality objective that differs from the applicable criterion or objective may be developed for the site. A RWQCB may develop site-specific objectives whenever it determines, in the exercise of its professional judgement, that it is appropriate to do so. Where a priority pollutant criterion or objective is not being attained in the water body, under certain circumstances, it may be more appropriate to pursue other approaches to achieve the applicable criterion or objective rather than develop a site-specific objective. These approaches include, but

are not limited to, watershed management and development of TMDLs (see Appendix 5 and Appendix 6). The RWQCB may investigate, facilitate, or implement such approaches as appropriate.

Regardless of an action taken by the RWQCB as described above, the RWQCB shall, at a public meeting, consider initiating the development of a site-specific objective under the following conditions:

(1) A written request for a site-specific study, accompanied by a preliminary commitment to fund the study, subject to development of a workplan[14], is filed with the RWQCB; and

(2) Either:

  (a) a priority pollutant criterion or objective is not achieved in the receiving water; or
  (b) a holder of an NPDES permit demonstrates that they do not, or may not in the future, meet an existing or potential effluent limitation based on the priority pollutant criterion or objective; and

(3) A demonstration that the discharger cannot be assured of achieving the criterion or objective and/or effluent limitation through reasonable treatment, source control, and *pollution prevention measures. This demonstration may include, but is not limited to, as determined by the RWQCB:

  (a) an analysis of compliance and consistency with all relevant federal and State plans, policies, laws, and regulations;
  (b) a thorough review of historical limits and compliance with those limits;
  (c) a thorough review of current technology and technology-based limits; and
  (d) an economic analysis of compliance with the priority pollutant criterion or objective of concern.

During the period when site-specific objectives studies are being conducted, the RWQCB shall place effluent limitations based upon the applicable priority pollutant criteria or objectives into permits only in conjunction with an appropriate compliance schedule and interim requirements, as described in sections 2.1 and 2.2.

A discharger subject to a schedule for compliance with a CTR criterion or CTR criterion-based effluent limitations, as described in section 2.1, may choose to, concurrently with the actions necessary to achieve compliance, conduct the studies necessary to support the development and adoption of a site-specific objective.[15]

Following adoption of a site-specific objective by the RWQCB, existing effluent limitations shall be replaced with effluent limitations (calculated as described in section 1.4) based on the adopted site-specific objective if the analysis in section 1.3 indicates that a limitation for the pollutant is

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[14] The elements presented under the "Special Studies Process" in Appendix 5 should be considered in developing the site-specific objectives workplan.

[15] A RWQCB may include a compliance schedule in a water quality standard based on a site-specific objective. Such a compliance schedule is separate and distinct from the compliance schedules established by this Policy.

required. In the event that, for reasons beyond the control of the discharger, a decision whether or not to adopt site-specific objectives has not been made by the RWQCB before the end of the compliance schedule, the compliance schedule shall be extended for an additional period to allow time for a decision whether or not to adopt the objective. However, in no event may a compliance schedule exceed the maximum time period allowed for compliance with the CTR criteria (as described in section 2.1) or priority pollutant objectives (as described in the basin plan, if applicable), unless an exception has been granted (in accordance with section 5.3).

Development of Site-Specific Objectives

Water quality objectives shall be developed in a manner consistent with State and federal law and regulations. In accordance with the State's Porter-Cologne Water Quality Control Act (Division 7 of the Water Code), objectives must provide for the reasonable protection of beneficial uses based on consideration of the factors listed in Water Code Section 13241. In accordance with federal law (CWA) and regulations (40 CFR 131.11, revised as of July 1, 1997), the objectives must be based on sound scientific rationale and protect the designated beneficial uses of the receiving water.

The RWQCB shall use scientifically defensible methods appropriate to the situation to derive the objectives. Such methods may include U.S. EPA-approved methods (e.g., Water Effects Ratio [WER] procedure, recalculation procedure, a combination of recalculation and WER procedures, Resident Species Procedure), and/or other methods specified in the workplan.

A site-specific objective adopted by the RWQCB may include a compliance schedule. However, if attainment of the potential objective(s) developed under the study is anticipated to be infeasible (as defined in 40 CFR 131.10(g), revised as of July 1, 1997), or if the RWQCB otherwise determines it is appropriate, a *use attainability analysis (UAA) may be conducted. The RWQCB shall conduct, with the participation of interested persons, as appropriate, the UAA in accordance with 40 CFR 131.10(j) (revised as of July 1, 1997). If the UAA shows that attainment of the designated beneficial use(s) is not feasible (pursuant to 40 CFR 131.10(g), revised as of July 1, 1997), the RWQCB shall designate an alternative beneficial use or subcategory of use, and develop appropriate water quality objectives to protect the new use(s). Both the use(s) and the objective(s) established to protect it would be reevaluated during the triennial reviews of the State's water quality standards.

5.3 Exceptions

Categorical and case-by-case exceptions to this Policy may be granted pursuant to the provisions below.

Categorical Exceptions

The RWQCB may, after compliance with the California Environmental Quality Act (CEQA), allow short-term or seasonal exceptions from meeting the priority pollutant criteria/objectives if determined to be necessary to implement control measures either:

1.for resource or pest management (i.e., vector or weed control, pest eradication, or fishery management) conducted by *public entities to fulfill statutory requirements, including, but not limited to, those in the California Fish and Game, Food and Agriculture, Health and Safety, and Harbors and Navigation codes; or

2.regard ing drinking water conducted to fulfill statutory requirements under the federal Safe Drinking Water Act or the California Health and Safety Code. Such categorical exceptions may also be granted for draining water supply reservoirs, canals, and pipelines for maintenance, for draining municipal storm water conveyances for cleaning or maintenance, or for draining water treatment facilities for cleaning or maintenance.

For each project, the discharger shall notify potentially affected public and governmental agencies. Also, the discharger shall submit to the Executive Officer of the appropriate RWQCB, for approval:

(1) A detailed description of the proposed action, including the proposed method of completing the action;

(2) A time schedule;

(3) A discharge and receiving water quality monitoring plan (before project initiation, during the project, and after project completion, with the appropriate quality assurance and quality control procedures);

(4) CEQA documentation;

(5) Contingency plans;

(6) Identification of alternate water supply (if needed); and

(7) Residual waste disposal plans.

Additionally, upon completion of the project, the discharger shall provide certification by a qualified biologist that the receiving water beneficial uses have been restored.

To prevent unnecessary delays in taking emergency actions or to expedite the approval process for expected or routine activities that fall under categorical exceptions, the discharger is advised to file with the appropriate RWQCB, in advance of seeking RWQCB approval, the information required in items (1)-(7) above, to the extent possible.

Case-by-Case Exceptions

Where site-specific conditions in individual water bodies or watersheds differ sufficiently from statewide conditions and those differences cannot be addressed through other provisions of this

Policy, the SWRCB may, in compliance with the CEQA, subsequent to a public hearing, and with the concurrence of the U.S. EPA, grant an exception to meeting a priority pollutant criterion/objective or any other provision of this Policy where the SWRCB determines:

1. The exception will not compromise protection of enclosed bay, estuarine, and inland surface waters for beneficial uses; and

2. The public interest will be served.

An example of where a case-by-case exception would be appropriate is where it is necessary to accommodate wastewater reclamation or water conservation.

APPENDIX 1

Definition of Terms

ACUTELY TOXIC CONDITIONS, as used in the context of mixing zones, refers to lethality that occurs to mobile aquatic organisms that move or drift through the mixing zone.

ARITHMETIC MEAN (μ), also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

Arithmetic mean = $\mu = \Sigma x / n$ where:

Σx is the sum of the measured ambient water concentrations, and
n is the number of samples.

AVERAGE MONTHLY EFFLUENT LIMITATION (AMEL) means the highest allowable average of daily pollutant discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of measurements.

BEST MANAGEMENT PRACTICES (BMPs) are methods, measures, or practices designed and selected to reduce or eliminate the discharge of pollutants to surface waters from point and nonpoint source discharges including storm water. BMPs include structural and non-structural controls, and operation and maintenance procedures, which can be applied before, during, and/or after pollution producing activities.

BIOACCUMULATIVE pollutants are those substances taken up by an organism from its surrounding medium through gill membranes, epithelial tissue, or from food and subsequently concentrated and retained in the body of the organism.

BIOLOGICALLY-BASED RECEIVING WATER FLOW refers to the method for determining receiving water flows developed by the U.S. EPA Office of Research and Development which directly uses the averaging periods and exceedance frequencies specified in the acute and chronic aquatic life criteria for individual pollutants (e.g., 1 day and 3 years for acute criteria, and 4 days and 3 years for the chronic criteria). Biologically-based flows can be calculated using the program DFLOW.

CARCINOGENIC pollutants are substances that are known to cause cancer in living organisms.

COEFFICIENT OF VARIATION (*CV*) is a measure of the data variability and is calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

COMPLETELY-MIXED DISCHARGE condition means not more than a 5 percent difference, accounting for analytical variability, in the concentration of a pollutant exists across a transect of the water body at a point within two stream/river widths from the discharge point.

DILUTION CREDIT is the amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation, based on the allowance of a specified mixing zone. It is calculated from the dilution ratio or determined through conducting a mixing zone study or modelling of the discharge and receiving water.

DILUTION RATIO is the critical low flow of the upstream receiving water divided by the flow of the effluent discharged.

DYNAMIC MODELS used for calculating effluent limitations predict the effects of receiving water and effluent flow and of concentration variability. The outputs of dynamic models can be used to base effluent limitations on probability estimates of receiving water concentrations rather than critical conditions (which are used in the steady-state model). The three dynamic modeling techniques recommended by the U.S. EPA for calculating effluent limitations are continuous simulation, Monte Carlo simulation, and lognormal probability modeling.

EFFLUENT CONCENTRATION ALLOWANCE (ECA) is a value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the coefficient of variation for the effluent monitoring data, to calculate a long-term average (LTA) discharge concentration. The ECA has the same meaning as waste load allocation (WLA) as used in U.S. EPA guidance (Technical Support Document For Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001).

ENCLOSED BAYS means indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay, Bodega Harbor, Tomales Bay, Drake's Estero, San Francisco Bay, Morro Bay, Los Angeles-Long Beach Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay. Enclosed bays do not include inland surface waters or ocean waters.

ESTIMATED CHEMICAL CONCENTRATION is the estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

ESTUARIES means waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and sea water. Estuarine waters include, but are not limited to, the Sacramento-San Joaquin Delta, as defined in Water Code Section 12220, Suisun Bay, Carquinez Strait downstream to the Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

EXISTING DISCHARGER means any discharger that is not a new discharger. An existing discharger includes an "increasing discharger" (i.e., an existing facility with treatment systems in

place for its current discharge that is or will be expanding, upgrading, or modifying its existing permitted discharge after the effective date of this Policy).

FOUR-DAY AVERAGE OF DAILY MAXIMUM FLOWS is the average of daily maximums taken from the data set in four-day intervals.

HARMONIC MEAN flows are expressed as $Q_{hm} = (n)/(\Sigma^{n}_{i=1} 1/x_i)$, where x_i = specific data values and n = number of data values.

INCOMPLETELY-MIXED DISCHARGE is a discharge that contributes to a condition that does not meet the meaning of a completely-mixed discharge condition.

INFEASIBLE means not capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.

INLAND SURFACE WATERS are all surface waters of the State that do not include the ocean, enclosed bays, or estuaries.

LOAD ALLOCATION (LA) is the portion of a receiving water's total maximum daily load that is allocated to one of its nonpoint sources of pollution or to natural background sources.

LONG-TERM ARITHMETIC MEAN FLOW is at least two years of flow data used in calculating an arithmetic mean as defined in this appendix.

MAXIMUM DAILY FLOW is the maximum flow sample of all samples collected in a calendar day.

MAXIMUM DAILY EFFLUENT LIMITATION (MDEL) means the highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

MEDIAN is the middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements (n) is odd, then the median = $X_{(n+1)/2}$. If n is even, then the median = $(X_{n/2} + X_{(n/2)+1})/2$ (i.e., the midpoint between the $n/2$ and $n/2+1$).

METHOD DETECTION LIMIT (MDL) is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in 40 CFR 136, Appendix B, revised as of May 14, 1999.

MINIMUM LEVEL (ML) is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific

analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

MIXING ZONE is a limited volume of receiving water that is allocated for mixing with a wastewater discharge where water quality criteria can be exceeded without causing adverse effects to the overall water body.

MUTAGENIC pollutants are substances that are known to cause a mutation (i.e., change in a gene or chromosome) in living organisms.

NEW DISCHARGER includes any building, structure, facility, or installation from which there is, or may be, a discharge of pollutants, the construction of which commenced after the effective date of this Policy.

OBJECTIONABLE BOTTOM DEPOSITS are an accumulation of materials or substances on or near the bottom of a water body which creates conditions that adversely impact aquatic life, human health, beneficial uses, or aesthetics. These conditions include, but are not limited to, the accumulation of pollutants in the sediments and other conditions that result in harm to benthic organisms, production of food chain organisms, or fish egg development. The presence of such deposits shall be determined by RWQCB(s) on a case-by-case basis.

OCEAN WATERS are the territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. Discharges to ocean waters are regulated in accordance with the SWRCB's California Ocean Plan.

PERSISTENT pollutants are substances for which degradation or decomposition in the environment is nonexistent or very slow.

POLLUTANT MINIMIZATION means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses.

POLLUTION PREVENTION means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code Section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the SWRCB or RWQCB.

PROCESS OPTIMIZATION means minor changes to the existing facility and treatment plant operations that optimize the effectiveness of the existing treatment processes.

PUBLIC ENTITY includes the federal government or a state, county, city and county, city, district, public authority, or public agency.

SOURCE OF DRINKING WATER is any water designated as municipal or domestic supply (MUN) in a RWQCB basin plan.

STANDARD DEVIATION (σ) is a measure of variability that is calculated as follows:

$$\sigma = (\sum[(x - \mu)^2]/(n - 1))^{0.5}$$

where:

x is the observed value;

μ is the arithmetic mean of the observed values; and

n is the number of samples.

TERATOGENIC pollutants are substances that are known to cause structural abnormalities or birth defects in living organisms.

TOXICITY REDUCTION EVALUATION (TRE) is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases [characterization, identification, and confirmation] using aquatic organism toxicity tests.)

USE ATTAINABILITY ANALYSIS is a structured scientific assessment of the factors affecting the attainment of the use which may include physical, chemical, biological, and economic factors as described in 40 CFR 131.10(g) (40 CFR 131.3, revised as of July 1, 1997).

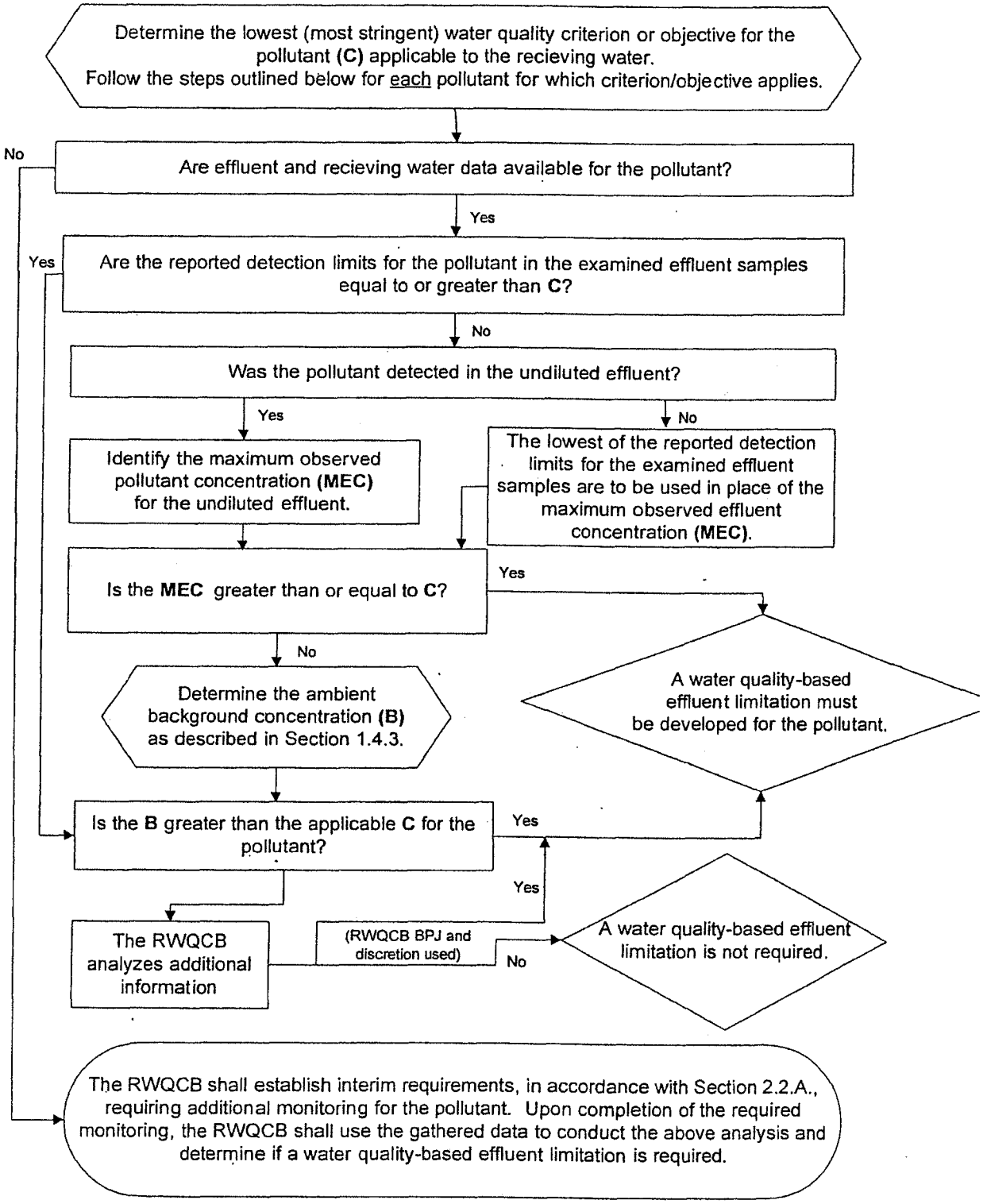
1Q10 is the lowest flow that occurs for one day with a statistical frequency of once every 10 years.

7Q10 is the average low flow that occurs for seven consecutive days with a statistical frequency of once every 10 years.

90th PERCENTILE OF OBSERVED DATA is the measurement in the ordered set of data (lowest to highest) where 90 percent of the reported measurements are less than or equal to that value.

APPENDIX 2

Determination of Pollutants Requiring Water Quality-Based Effluent Limitations



APPENDIX 3

U.S. Environmental Protection Agency Conversion Factors

Metal	Conversion Factor (CF) for Freshwater Acute Criteria	CF for Freshwater Chronic Criteria	CF for Saltwater Acute Criteria	CF(a) for Saltwater Chronic Criteria
Antimony	(d)	(d)	(d)	(d)
Arsenic	1.000	1.000	1.000	1.000
Beryllium	(d)	(d)	(d)	(d)
Cadmium (b)	0.944	0.909	0.994	0.994
Chromium (III)	0.316	0.860	(d)	(d)
Chromium (VI)	0.982	0.962	0.993	0.993
Copper	0.960	0.960	0.83	0.83
Lead (b)	0.791	0.791	0.951	0.951
Mercury	0.85	0.85	0.85	0.85
Nickel	0.998	0.997	0.990	0.990
Selenium	(c)	(c)	0.998	0.998
Silver	0.85	(d)	0.85	(d)
Thallium	(d)	(d)	(d)	(d)
Zinc	0.978	0.986	0.946	0.946

Footnotes:

(a) Conversion Factors for chronic marine criteria are not currently available. Conversion Factors for acute marine criteria have been used for both acute and chronic marine criteria.

(b) Conversion Factors for these pollutants are hardness dependent. CFs are based on a hardness of 100 mg/L as calcium carbonate ($CaCO_3$). Other hardness can be used; CFs should be recalculated using the following equations:
Cadmium: Acute: CF = 1.136672 - [(ln {hardness})(0.041838)]
Cadmium: Chronic: CF = 1.101672 - [(ln {hardness})(0.041838)]
Lead: Acute and Chronic: CF = 1.46203 - [ln {hardness})(0.145712)]

(c) Bioaccumulative compound and inappropriate to adjust to percent dissolved.

(d) U.S. EPA has not published an aquatic life criterion value.

NOTE: The term "Conversion Factor" represents the recommended conversion factor for converting a metal criterion expressed as the total recoverable fraction in the water column to a criterion expressed as the dissolved fraction in the water column. See "Office of Water Policy and Technical Guidance on Interpretation and Implementation of Aquatic Life Metals Criteria," October 1, 1993, by Martha G. Prothro, Acting Assistant Administrator for Water, available from the Water Resource Center, USEPA, 401 M St. SW., mail code RC 4100, Washington, DC 20460; and 40 CFR §131.36(b)(1).

Source: CTR (65 Fed. Register 31682-31719, May 18, 2000), adding Section 131.38 to 40 CFR).

APPENDIX 4

SWRCB Minimum Levels in ppb (μg/L)

The Minimum Levels (MLs) in this appendix are for use in reporting and compliance determination purposes in accordance with section 2.4 of this Policy. These MLs were derived from data for priority pollutants provided by State certified analytical laboratories in 1997 and 1998. These MLs shall be used until new values are adopted by the SWRCB and become effective. The following tables (Tables 2a - 2d) present MLs for four major chemical groupings: volatile substances, semi-volatile substances, inorganics, and pesticides & PCBs.

Table 2a - VOLATILE SUBSTANCES*	GC	GCMS
1,1 Dichloroethane	0.5	1
1,1 Dichloroethene	0.5	2
1,1,1 Trichloroethane	0.5	2
1,1,2 Trichloroethane	0.5	2
1,1,2,2 Tetrachloroethane	0.5	1
1,2 Dichlorobenzene (volatile)	0.5	2
1,2 Dichloroethane	0.5	2
1,2 Dichloropropane	0.5	1
1,3 Dichlorobenzene (volatile)	0.5	2
1,3 Dichloropropene (volatile)	0.5	2
1,4 Dichlorobenzene (volatile)	0.5	2
Acrolein	2.0	5
Acrylonitrile	2.0	2
Benzene	0.5	2
Bromoform	0.5	2
Bromomethane	1.0	2
Carbon Tetrachloride	0.5	2
Chlorobenzene	0.5	2
Chlorodibromo-methane	0.5	2
Chloroethane	0.5	2
Chloroform	0.5	2
Chloromethane	0.5	2
Dichlorobromo-methane	0.5	2
Dichloromethane	0.5	2
Ethylbenzene	0.5	2
Tetrachloroethene	0.5	2
Toluene	0.5	2
trans-1,2 Dichloroethylene	0.5	1
Trichloroethene	0.5	2
Vinyl Chloride	0.5	2

*The normal method-specific factor for these substances is 1, therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance.

Table 2b - SEMI-VOLATILE SUBSTANCES*	GC	GCMS	LC	COLOR
1,2 Benzanthracene	10	5		
1,2 Dichlorobenzene (semivolatile)	2	2		
1,2 Diphenylhydrazine		1		
1,2,4 Trichlorobenzene	1	5		
1,3 Dichlorobenzene (semivolatile)	2	1		
1,4 Dichlorobenzene (semivolatile)	2	1		
2 Chlorophenol	2	5		
2,4 Dichlorophenol	1	5		
2,4 Dimethylphenol	1	2		
2,4 Dinitrophenol	5	5		
2,4 Dinitrotoluene	10	5		
2,4,6 Trichlorophenol	10	10		
2,6 Dinitrotoluene		5		
2- Nitrophenol		10		
2-Chloroethyl vinyl ether	1	1		
2-Chloronaphthalene		10		
3,3' Dichlorobenzidine		5		
3,4 Benzofluoranthene		10	10	
4 Chloro-3-methylphenol	5	1		
4,6 Dinitro-2-methylphenol	10	5		
4- Nitrophenol	5	10		
4-Bromophenyl phenyl ether	10	5		
4-Chlorophenyl phenyl ether		5		
Acenaphthene	1	1	0.5	
Acenaphthylene		10	0.2	
Anthracene		10	2	
Benzidine		5		
Benzo(a) pyrene(3,4 Benzopyrene)		10	2	
Benzo(g,h,i)perylene		5	0.1	
Benzo(k)fluoranthene		10	2	
bis 2-(1-Chloroethoxyl) methane		5		
bis(2-chloroethyl) ether	10	1		
bis(2-Chloroisopropyl) ether	10	2		
bis(2-Ethylhexyl) phthalate	10	5		
Butyl benzyl phthalate	10	10		
Chrysene		10	5	
di-n-Butyl phthalate		10		
di-n-Octyl phthalate		10		
Dibenzo(a,h)-anthracene		10	0.1	
Diethyl phthalate	10	2		
Dimethyl phthalate	10	2		
Fluoranthene	10	1	0.05	
Fluorene		10	0.1	
Hexachloro-cyclopentadiene	5	5		

Table 2b - SEMI-VOLATILE SUBSTANCES*	GC	GCMS	LC	COLOR
Hexachlorobenzene	5	1		
Hexachlorobutadiene	5	1		
Hexachloroethane	5	1		
Indeno(1,2,3,cd)-pyrene		10	0.05	
Isophorone	10	1		
N-Nitroso diphenyl amine	10	1		
N-Nitroso-dimethyl amine	10	5		
N-Nitroso -di n-propyl amine	10	5		
Naphthalene	10	1	0.2	
Nitrobenzene	10	1		
Pentachlorophenol	1	5		
Phenanthrene		5	0.05	
Phenol **	1	1		50
Pyrene		10	0.05	

* With the exception of phenol by colorimetric technique, the normal method-specific factor for these substances is 1000, therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance multiplied by 1000.

** Phenol by colorimetric technique has a factor of 1.

Table 2c – INORGANICS*	FAA	GFAA	ICP	ICPMS	SPGFAA	HYDRIDE	CVAA	COLOR	DCP
Antimony	10	5	50	0.5	5	0.5			1000
Arsenic		2	10	2	2	1		20	1000
Beryllium	20	0.5	2	0.5	1				1000
Cadmium	10	0.5	10	0.25	0.5				1000
Chromium (total)	50	2	10	0.5	1				1000
Chromium VI	5							10	
Copper	25	5	10	0.5	2				1000
Cyanide								5	
Lead	20	5	5	0.5	2				10,000
Mercury				0.5			0.2		
Nickel	50	5	20	1	5				1000
Selenium		5	10	2	5	1			1000
Silver	10	1	10	0.25	2				1000
Thallium	10	2	10	1	5				1000
Zinc	20		20	1	10				1000

* The normal method-specific factor for these substances is 1, therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance.

Table 2d - PESTICIDES – PCBs*	GC
4,4'-DDD	0.05
4,4'-DDE	0.05
4,4'-DDT	0.01
a-Endosulfan	0.02
a-Hexachloro-cyclohexane	0.01
Aldrin	0.005
b-Endosulfan	0.01
b-Hexachloro-cyclohexane	0.005
Chlordane	0.1
d-Hexachloro-cyclohexane	0.005
Dieldrin	0.01
Endosulfan Sulfate	0.05
Endrin	0.01
Endrin Aldehyde	0.01
Heptachlor	0.01
Heptachlor Epoxide	0.01
Lindane(g-Hexachloro-cyclohexane)	0.02
PCB 1016	0.5
PCB 1221	0.5
PCB 1232	0.5
PCB 1242	0.5
PCB 1248	0.5
PCB 1254	0.5
PCB 1260	0.5
Toxaphene	0.5

* The normal method-specific factor for these substances is 100, therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance multiplied by 100.

Techniques:

GC - Gas Chromatography
GCMS - Gas Chromatography/Mass Spectrometry
HRGCMS - High Resolution Gas Chromatography/Mass Spectrometry (i.e., EPA 1613, 1624, or 1625)
LC - High Pressure Liquid Chromatography
FAA - Flame Atomic Absorption
GFAA - Graphite Furnace Atomic Absorption
HYDRIDE - Gaseous Hydride Atomic Absorption
CVAA - Cold Vapor Atomic Absorption
ICP - Inductively Coupled Plasma
ICPMS - Inductively Coupled Plasma/Mass Spectrometry
SPGFAA - Stabilized Platform Graphite Furnace Atomic Absorption (i.e., EPA 200.9)
DCP - Direct Current Plasma
COLOR - Colorimetric

APPENDIX 5

Special Studies

Pre-Evaluation for Special Studies
Decision Tree with Attached Narrative Discussion

A special study is sometimes conducted as part of a regulatory process (standard setting and permit writing) and may be conducted as part of a collaborative watershed planning effort. Special studies can provide site-specific data that can assist in decision-making regarding water quality and beneficial use issues.

Many water quality problems may be best addressed on a watershed or water body basis. The SWRCB believes that stakeholders should be able to develop flexible and innovative solutions for water quality problems in their watershed. For special studies conducted as part of a watershed management plan, the watershed management group should be involved in the design of the study, and study information should be provided back to the committee. Watershed or water body studies may gather data regarding topics such as:

- TMDLs, WLAs, and LAs (see Appendix 6);
- Regional ambient monitoring (regional ambient monitoring is the collection of scientific information regarding water quality and impacts to beneficial uses for a specified portion of, or an entire, watershed or water body); and
- Contaminant fate and transport monitoring (contaminant fate and transport monitoring is the gathering of scientific information regarding how a specific pollutant[s] moves through the environment and how the pollutant[s] degrades or is otherwise transformed in the environment).

These types of studies are useful to collect integrated, comprehensive, and systematic data regarding:

- Baseline concentrations of toxic pollutants in the water and sediment;
- Seasonal, annual, and long-term trends in water quality;
- Causes and effects of water quality problems;
- Effectiveness of a water quality control effort;
- Greater certainty regarding existing monitoring data; etc.

Any of the studies discussed below may be undertaken as part of a watershed approach to addressing regional water quality issues. Information collected as part of a watershed or water

body study can be used as a way to define parameters (e.g., ambient background concentrations, mixing zones, etc.) related to the development of effluent limitations as part of the permitting process or to evaluate whether changes in water quality standards are appropriate. A watershed or water body approach is also useful to dischargers because information collected as a part of one effluent limitation or standard-setting study can be shared with other stakeholders in the same water body.

Studies for Setting Effluent Limitations

Studies regarding establishing effluent limitations can be done as part of the permitting process. Such studies may be simpler and there may be fewer interested stakeholders than studies involving more than one discharger, or an entire water body or watershed. However, when such studies are undertaken individually, the discharger, the RWQCB, and other stakeholders do not gain the benefit of data collected from others in the watershed.

Special studies may address topics such as the following:

- Determining pollutants requiring effluent limitations (see section 1.3);
- Metals translators (see section 1.4.1); or
- Mixing zones (see section 1.4.2).

Studies For Changes to Water Quality Standards

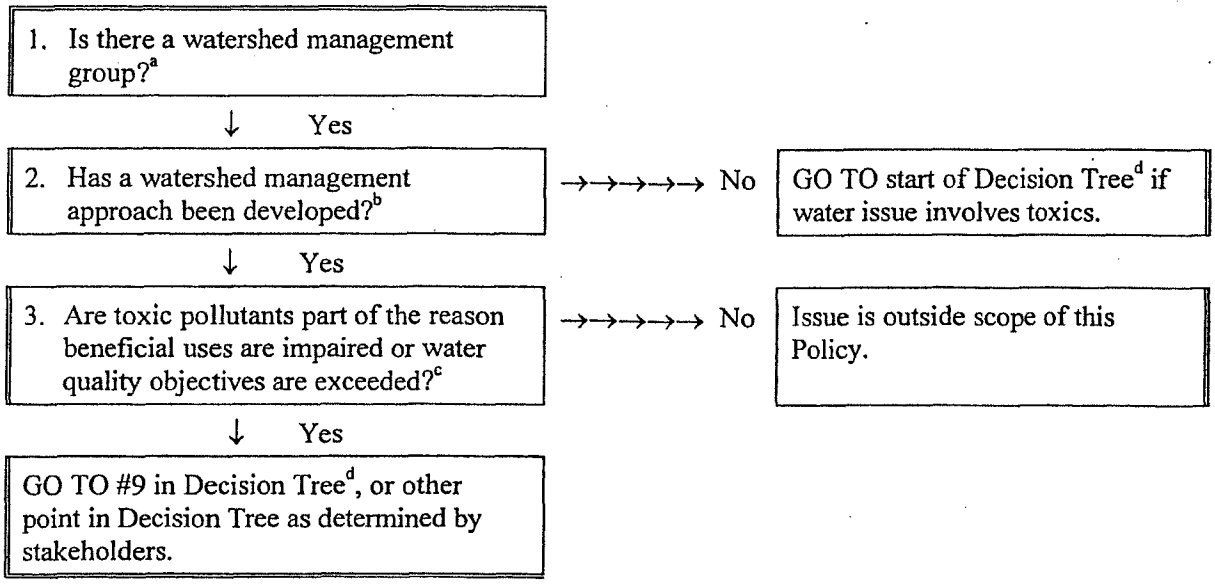
Establishing or modifying water quality standards (i.e., beneficial uses and water quality criteria/objectives) may involve complex and resource intensive studies. A detailed workplan will normally be needed because early planning and coordination with the RWQCB and U.S. EPA is critical to the development of a successful study. In addition, a workplan will normally be appropriate because there will be more stakeholder interest and involvement of other public agencies (e.g., Department of Fish and Game, U.S. Fish and Wildlife Service, etc.). Involvement in a watershed management planning effort would facilitate the sharing of information among stakeholders in the watershed, both in gathering information for the study and in sharing the results. Studies related to changes in water quality standards may address topics such as the following:

- Site-specific objective studies (see section 5.2); and
- Use attainability analysis (UAA) (see section 5.2).

Pre-Evaluation

As a first step in determining whether and how to conduct a special study, the RWQCB or other stakeholders may want to evaluate whether it would be appropriate to address a water quality

issue through a watershed management approach. To do that, the factors in the following flowchart may be considered:



The decision tree and associated narrative discussion in Appendix 5 are provided to assist RWQCBs and stakeholders in identifying whether there is a current or potential water quality issue requiring attention [Compliance Status], the nature of the identified water quality issue [Screening-level Evaluation], and possible action to address the issue [Potential Options].

Based on this information, the RWQCB and stakeholders can determine whether a special study is needed and the scope of the study. This approach can help avoid initiation of costly and time-consuming studies which are not appropriately designed to resolve the specific issue in question. The decision tree is not meant to preclude the exploration of any other creative solutions; it is meant to encourage constructive dialogue among stakeholders.

Two specific considerations should be kept in mind when conducting the pre-evaluation suggested by this decision tree. First, users must be familiar with the quality of the data under review and the potential need to augment data which are not of adequate quality. Second, users should know what the existing beneficial uses are (i.e., uses attained since 1975).

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[a] Is there a committee of local interests in both the public and private sectors that are actively involved in the management of the watershed area?

[b] Has a watershed management approach that identifies key issues, boundaries, objectives, and early actions been developed?

[c] A study may be necessary to determine whether toxics are part of the cause of the impairment of beneficial uses. This Policy applies only to the CTR and NTR criteria, and applicable chemical-specific basin plan objectives for priority toxic pollutants.

[d] The decision tree is on page APPENDIX 5 - 6.

Special Studies Process

A. Workplan

If appropriate, the RWQCB may participate in developing a detailed workplan with interested persons (which can include, but are not limited to, U.S. EPA, the RWQCB, the SWRCB, and affected dischargers) prior to proceeding with a special study. The workplan may include the following elements:

(1) Formation of a project team for the workplan, which may include the Department of Fish and Game, the U.S. Fish and Wildlife Service, and other stakeholders;

(2) Purpose of the workplan;

(3) Responsibilities of the persons associated with the workplan;

(4) Budget and cost-sharing plan. This plan must be determined on a case-by-case basis; however, the SWRCB encourages sharing of costs (based on availability of funding), where there are multiple persons who wish to support the goals of the study;

(5) Development of the following elements:

(a) Identification of tasks(s),
(b) Purpose of tasks(s),
(c) Method by which task(s) will be implemented,
(d) Products of the tasks(s),
(e) Schedule for the task(s),
(f) Responsibility for implementing the task(s), and
(g) Budget and funding for the task(s);

(6) Administrative policies and procedures to govern oversight of the special studies process (e.g., amending the workplan, conflict resolution, etc.); and

(7) Project schedule.

B. Scientific Review Panel

If, during the data interpretation phase of a special study, the RWQCB, SWRCB, U.S. EPA, or other stakeholders have differing opinions with regard to the interpretation of data, the RWQCB and stakeholders may want to seek the advice of an independent scientific review panel. The method of selecting the panel, cost reimbursement, and other details regarding the conflict resolution process could be included in the workplan.

C. Compliance Schedule

A permit compliance schedule (as described in section 2.1) may allow sufficient time for collection of data, completion of a study, and determination of compliance measures. While special studies are being conducted, interim requirements may be established by the RWQCB (as described in section 2.2). However, in no event may a compliance schedule exceed the time period allowed in this Policy, unless an exception has been granted.

D. Environmental and Economic Impacts

To ensure that environmental and economic impacts are adequately addressed, the RWQCB staff shall, as part of the special study workplan:

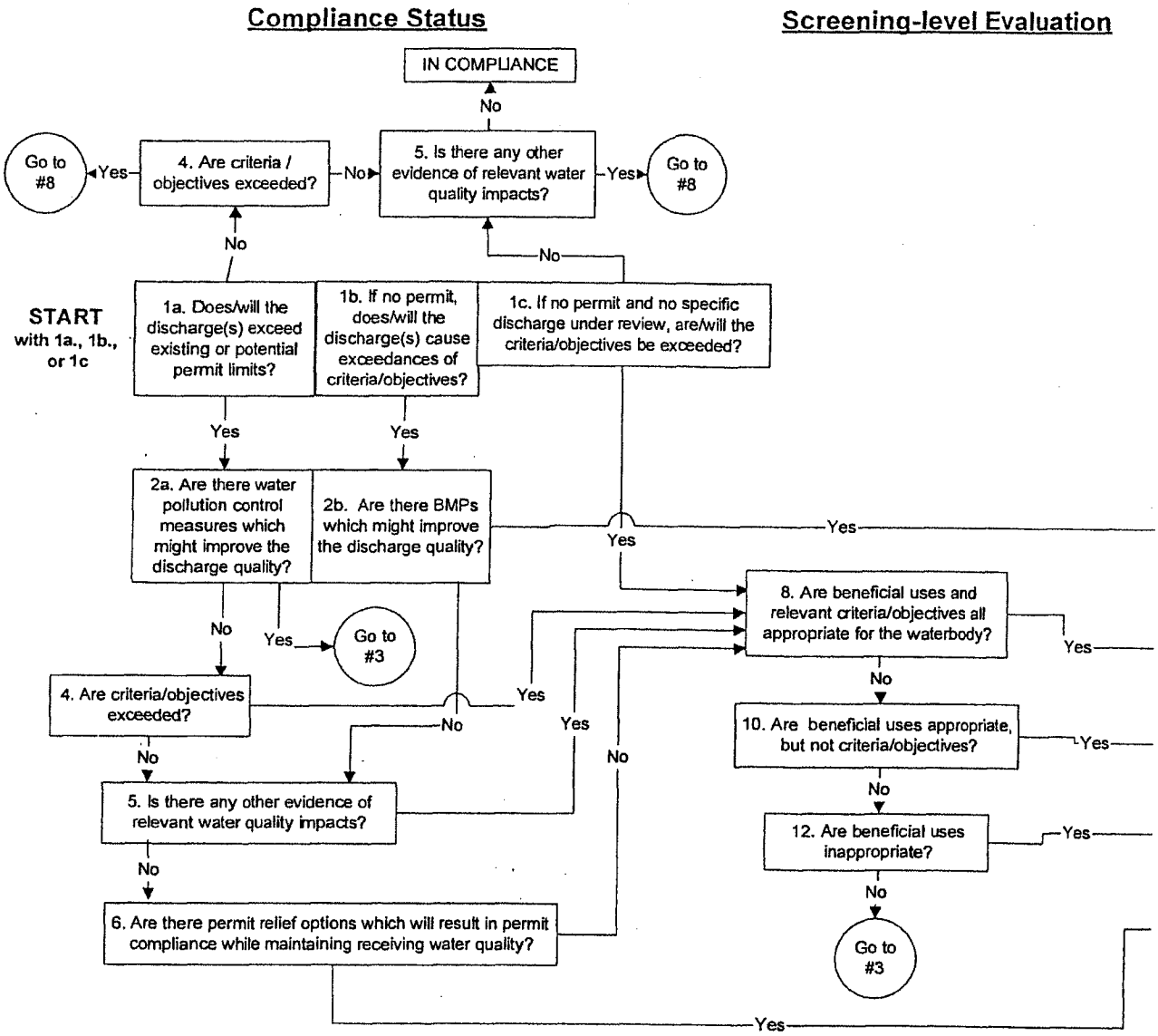
(1) Comply with CEQA, if applicable; and

(2) Direct the preparation of an analysis documenting economic impacts if site-specific objectives or a change in designated beneficial uses is being considered under 40 CFR 131.10(g)(6), revised as of July 1, 1997.

E. Antidegradation and Other Legal Requirements

RWQCB staff shall, as part of the special study workplan, ensure compliance with SWRCB Resolution No. 68-16 (Statement of Policy with Respect to Maintaining High Quality of Waters in California) and any other applicable legal requirements.

Pre-Evaluation for Special Studies
Decision Tree with Attached Narrative Discussion



Narrative Discussion of Decision Tree:

1a. Does/will a discharge exceed existing or potential permit limits for toxic pollutants? This question applies to discharges regulated by a National Pollutant Discharge Elimination System (NPDES) permit or Waste Discharge Requirements (WDRs). If the discharge(s) in question is not regulated by a discharge permit, proceed to #1b. It is assumed that data used to answer this question are reliable.

1b. If no permit, does the discharge(s) cause exceedances of criteria/objectives? This question primarily applies to nonpoint discharges, though it could conceivably apply to point source discharges which are not currently permitted. It is assumed that data used to answer this question are reliable.

1c. If no permit and no specific discharge(s) are under review, are criteria/objectives exceeded? It is assumed that data used to answer this question are reliable.

2a. Are there water pollution control measures which might improve the water quality? A water pollution control program may include, as appropriate: pollution control technologies; pretreatment requirements; and pollution prevention, waste minimization, and source control measures. This question is meant to elicit consideration of effluent quality control measures which could be implemented as a full or partial solution to the identified permit noncompliance issue. It is not intended as a barrier to the exploration of other potential forms of regulatory adjustment.

2b. Are there Best Management Practices (BMPs) which might improve water quality? BMPs are pollution management measures designed to reduce the water quality impacts, where they exist, associated primarily with non-point source discharges. As with #2a above, this question is meant to elicit consideration of discharge control measures which could be implemented as a full or partial solution to the identified noncompliance issue. It is not intended as a barrier to the exploration of other potential forms of regulatory adjustment.

3. Consider whether implementation of water pollution control measures and/or BMPs will lead to compliance. Simultaneously, continue to #4 if deemed appropriate, considering such questions as whether or not full compliance will be achieved by these means, or whether it would be cost effective. As stated, the simple determination that implementation of pollution control measures and/or BMPs might improve the discharge or water quality should not preclude the exploration of other potential regulatory adjustment options, as well. For clarity, the reviewer should proceed not to box four prime, but to box four.

4. Are criteria/objectives exceeded? It is assumed that data used to answer this question are reliable and appropriate hardness adjustments have been made.

5. Is there any other evidence of relevant water quality impacts? This question is meant to capture those situations where the criteria/objective for the pollutant of concern do not exist

or appear to be under protective. "Other evidence" might include: bioconcentration or biocriteria data, population studies, food web analyses, etc. Impacts to wildlife should be considered as should impacts to threatened and endangered species. The potential for impacts to be of a seasonal nature should also be considered in this pre-evaluation. "Relevant water quality impacts" are those impacts which have a demonstrable relationship to the pollutant(s) of concern.

6. Are there permit relief options which will result in permit compliance while maintaining receiving water quality? Permit relief options might include, where appropriate: development of a mixing zone, modification of the averaging periods, adoption of a variance, etc. For unpermitted discharges or pre-evaluations involving no specific discharges, the user should continue to box #8.

7. Implement permit relief options. Continue to #8 if full compliance will not be achieved by these means. The development of permit relief options would occur through a request to the RWQCB.

8. Are beneficial uses and criteria/objectives both appropriate for the water body? To answer this question, a screening-level evaluation may be necessary, including an evaluation of the associated regulatory history, the site-specific conditions, and the status of current, applicable scientific understanding. It is assumed that data used to answer this question are reliable.

   This question is best answered when a watershed stakeholder group has formed and collectively either: 1) evaluated the condition of the watershed through a watershed management plan, 2) evaluated the condition of the watershed through less formal means, or 3) convened discussions regarding the condition of the watershed. If one does not currently exist, a watershed stakeholder group should be formed if it appears to be a useful forum for discussion and review. The following more specific questions may apply:

   - Is the water effluent dominated, agricultural drainage water dominated, etc.? These water bodies may be likely candidates for the appropriate application of regulatory adjustments (e.g., SSO or UAA).

   - Were the current beneficial uses applied on a national, state-wide, or region-wide basis or have they been specifically designated for the water body in question? While not the only candidates, water bodies for which beneficial uses have been applied on a national, state-wide, or region-wide basis may be candidates for the appropriate application of regulatory adjustments (e.g., SSO).

   - Are there rare, threatened, or endangered species, or ecological conditions which the currently applied beneficial uses do not adequately describe or the water quality objectives do not fully protect?

   - Has the beneficial use and the water quality necessary to maintain the beneficial use been attained since 1975?

- How do anti-degradation requirements apply?
- Are elevated constituents the result of 1) natural phenomena or 2) anthropogenic activities that ceased prior to 1975?
- Do the currently designated beneficial uses protect all existing and appropriate potential uses?
- Are natural, ephemeral, intermittent, or low flow conditions or water levels preventing the attainment of the designated non-existing uses?
- Are there human-caused conditions or sources of pollution which prevent attainment of the uses but either cannot be remedied or would cause greater environmental damage if corrected?
- Does the presence of dams, diversions, or other types of hydrologic modifications preclude the attainment of designated non-existing beneficial uses?
- Do the physical conditions of the water body preclude attainment of aquatic life protection uses (i.e., lack of proper substrate, cover, flow, depth, pools, riffles, and the like)?
- Does attainment of designated beneficial uses require the application of controls which would result in substantial and widespread economic and social impact?
- Have the appropriate water characteristics (e.g., hardness, pH) been accounted for in the CTR criteria?
- Has an appropriate set of species been evaluated in setting the CTR criteria and toxicity objective?

9. Conduct a total maximum daily load analysis and implement the results. Conducting a TMDL could result in, among other things, waste load allocations, BMP implementation for non-point dischargers, and/or effluent trading options for point and non-point source dischargers. (See Appendix 6 regarding TMDLs.)

10. Are beneficial uses appropriate but not criteria/objectives for toxic pollutants? See #8 above.

11. Conduct a site-specific objectives analysis. An SSO study will include one or more of the following activities:

    - Recalculation of objective;
    - Water effects ratio or other similar method; or
    - Any scientifically defensible process.

U.S. EPA's "Guidelines for Deriving Numerical Aquatic Site Specific Water Quality Criteria by Modifying National Criteria," dated 1984 (EPA-600/3-84-099), provides guidance for conducting an SSO study.

U.S. EPA's "Water Quality Standards Handbook," dated 1994, also provides general guidance in this area.

12. Are beneficial uses inappropriate? See #8 above.

13. Conduct a use attainability analysis (UAA) and implement the results. When a use is proposed for dedesignation, i.e., removed or replaced with a subcategory requiring less stringent standards, a UAA is necessary. In a case where a use is proposed to be added, a UAA is not necessary. A new use designation can be added for a water body following the normal public review process. A UAA will determine if physical, chemical, and/or biological factors affect the attainability of a designated use via a water body survey and assessment. An analysis of economic factors can also be included to determine whether substantial and widespread economic and social impacts would be caused by stringent pollution control requirements.

    U.S. EPA's "Technical Support Manual: Water body Survey and Assessment for Conducting Use Attainability Analyses," dated 1983, provides guidance for conducting a UAA as does Region 9's Interim Final "Guidance for Modifying Water Quality Standards and Protecting Effluent-Dependent Ecosystems," dated 1992. U.S. EPA's "Water Quality Standards Handbook," dated 1994, also provides general guidance in this area.

APPENDIX 6

Watershed Management and TMDLs

Watershed Management

The SWRCB will utilize and promote, to the extent feasible, a watershed approach to address water quality issues involving toxic pollutants. Compared to the more traditional, programmatic approach to water management, the watershed approach can look at all types of pollution and all sources of pollution. One consequence of the more global perspective is that attention can be trained on the most effective strategies for management (rather than the most programmatically expedient). Another consequence is that a much larger universe of interested persons becomes important to the management of water quality, and the ability to work with these people creates added value for water management. In utilizing the watershed approach, the SWRCB will work to marshall the expertise and resources of other agencies and the private sector to collaboratively manage water quality.

In a collaborative, stewardship effort, local interests are engaged with State and federal interests, and land managers, to work with water managers to solve complex resource management problems. A watershed perspective can also enhance interagency coordination by focusing programs on resource needs throughout the watershed.

Watershed management is an integrated holistic approach for restoring and protecting aquatic ecosystems and protecting human health in a geographic area. Watershed management may include diverse issues as defined by the watershed's stakeholders (persons with some interest in the watershed) to ensure comprehensive solutions. It reflects a growing consensus that many of the existing water quality problems can be best addressed by a more integrated, basin-wide approach. The purpose of watershed management is variously viewed as (1) a method for increasing participation at the local level in water quality protection, (2) an approach to reducing the impact of nonpoint sources, (3) a strategy for integrating management of all components of aquatic ecosystems, and (4) a process for optimizing the cost effectiveness of a blend of point and nonpoint source control efforts.

Whichever purpose or blend of purposes predominates, watershed management is not a new centralized program that competes with or replaces existing programs. The significant advantage of the watershed management approach is that it encourages a collaborative, stewardship-driven process where diverse interests (individuals, landowners, farmers, POTWs, industries, environmentalists, and agencies) can work in conjunction with SWRCB and RWQCB staff to develop a consensus on, and share responsibility for, addressing water quality problems. The watershed approach assumes all stakeholders are brought to the table; therefore, there should be one watershed group that can develop a plan for the watershed that addresses the interests of stakeholders in the watershed. Furthermore, watershed management provides a mechanism for considering social and economic interests, in the context of resolving water quality issues. The SWRCB and RWQCBs will work to preserve the integrity of the watershed process and facilitate an open and timely resolution of issues.

In some cases, there is no active watershed management group that has evolved far enough to have identified key issues, boundaries, objectives, and early actions. In these instances, a group of government agencies may work together to define the conditions in a water body and to identify the specific parameters contributing to beneficial use impairments. In any event, the RWQCBs may have to act more or less independently to meet legal requirements using primarily in-house staff. Participation from other interested persons, under these circumstances, is accomplished through the SWRCB and RWQCB public hearing processes.

Watershed management planning and implementation actions will occur primarily at the RWQCB and local level. However, the SWRCB will provide training in stewardship and watershed management, and support educational efforts involving K through 12 programs as well as land owners/managers.

TMDLs and Watershed Management

TMDLs are required for all waters listed pursuant to CWA Section 303(d)(1)(A). The SWRCB is committed to expeditiously addressing these water quality problems.

A TMDL establishes the amount of a pollutant that may be discharged into a water body and still maintain water quality standards with seasonal variations and a margin of safety that takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality. The TMDL process is defined in federal regulations (40 CFR 130.7, revised as of July 1, 1996) and generally consists of five steps:

(1) Identification by each state of water quality-limited waters that do not now, or are not expected to, attain state water quality standards after implementation of technology-based effluent limitations, more stringent effluent limitations required by federal, State, or local authority, and other pollution control requirements (e.g., best management practices) required by local, State, or federal authority, and identification of impairment;

(2) Establishment of priority rankings for the development of TMDLs;

(3) Development of waste load allocations (WLAs), load allocations (LAs), and TMDLs;

(4) Incorporation of the loadings in the RWQCB basin plans; and

(5) Submittal of segments identified, priority ranking, and loads established to U.S. EPA for approval.

Development of TMDLs can utilize the watershed approach to assess and identify water quality-limited segments and pollutants causing impairment, identify sources, and allocate pollutant loads. The watershed approach may address a broader range of issues than the TMDLs, but the approach can: (1) result in achieving or maintaining water quality standards so that waters are not added to the 303(d) list; (2) result in attainment of water quality standards, through means other than the TMDL process, so that waters can be removed from the 303(d) list; or (3) be used to develop TMDLs. A watershed group can develop a TMDL if the TMDL complies with applicable federal requirements.

EXHIBIT "17"

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SANTA ANA REGION

ORDER NO. R8-2010-0033
NPDES NO. CAS 618033

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT AND WASTE DISCHARGE REQUIREMENTS FOR THE RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, THE COUNTY OF RIVERSIDE, AND THE INCORPORATED CITIES OF RIVERSIDE COUNTY WITHIN THE SANTA ANA REGION

AREA-WIDE URBAN RUNOFF MANAGEMENT PROGRAM

The following Discharger(s) are subject to waste discharge requirements as set forth in this Order:

Table 1. Municipal Permittees (Dischargers)

Principal Permittee	Riverside County Flood Control and Water Conservation District (RCFC&WCD)*	
Co–Permittees	1. Beaumont	9. Moreno Valley
	2. Calimesa	10. Murrieta
	3. Canyon Lake	11. Norco
	4. Corona	12. Perris
	5. County of Riverside (County)	13. Riverside
	6. Hemet	14. San Jacinto
	7. Lake Elsinore	15. Wildomar
	8. Menifee	

The Principal Permittee and the Co-Permittees are collectively referred to as the Permittees or the Dischargers.

Table 2. - Administrative Information

This Order was adopted by the Regional Water Board on:	**January 29, 2010**
This Order will become effective on:	**January 29, 2010**
This Order will expire on:	**January 29, 2015**
The U.S. Environmental Protection Agency (USEPA) and the California Regional Water Quality Control Board have classified this discharge as a major discharge.	
The Discharger must file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than 180 days in advance of the Order expiration date.	

IT IS HEREBY ORDERED, that this Order supersedes Order No. R8-2002-0011 except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the California Water Code (CWC) and regulations adopted there under, and the provisions of the federal Clean Water Act (CWA), and regulations and guidelines adopted there under, the Permittees must comply with the requirements in this Order.

I, Gerard J. Thibeault, Executive Officer, do hereby certify that this Order No. R8-2010-0033 with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on January 29, 2010.

Gerard J. Thibeault, Executive Officer

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I. FACILITY INFORMATION

A. Each of the municipalities listed in Table 1, above, hereinafter called Permittees, owns and/or operates portions of the municipal separate storm sewer system (MS4[1]), through which Urban Runoff is discharged into Waters of the United States (Waters of the US) that are located within the jurisdiction of the Santa Ana Regional Water Quality Control Board (Santa Ana Region). The MS4 falls into one or more of the following categories: (1) a medium or large MS4 that services a population of greater than 100,000 or 250,000 respectively; or (2) an MS4 which contributes to a violation of a Water Quality Standard; or (3) an MS4 which is a significant contributor of Pollutants to Waters of the US; or (4) an MS4 owned and/or operated by a small municipality that is interrelated to a medium or large municipality. Section 402(p) of the CWA requires that discharges of Urban Runoff from MS4 be regulated under a National Pollutant Discharge Elimination System (NPDES) permit.

B. This Order regulates the discharge of Pollutants in Urban Runoff from non-agricultural Anthropogenic sources from the MS4 that is owned and/or operated by the Permittees. The Permittees lack legal jurisdiction over discharges into their MS4 facilities from agricultural activities, State and federal facilities, public schools and hospitals, utilities, railroads, and special districts, Native American tribal lands, wastewater management agencies and other point and non-point source discharges otherwise permitted by the Regional Board. The Regional Board recognizes that the Permittees should not be held responsible for discharges from such facilities or Pollutants in those discharges. However, to the extent that the Permittees authorize the connection of these discharges into their MS4s, this Order requires the Permittees to provide written notification of Water Quality Management Plan (WQMP) requirements for post-construction best management practices (BMPs) and/or other applicable requirements of this Order. A WQMP approved by the Permittee who owns the MS4 may constitute compliance with the General Construction Permit post construction Standards[2] for the Permit Area.

C. The Co-Permittees have established legal authority to control discharges into the MS4 facilities that they own and/or operate. As owners and/or operators of the MS4, the Permittees are responsible for discharges into their MS4 facilities to the extent of their legal authority. The discharge of Pollutants into the MS4 may cause or contribute to, or threaten to cause or contribute to, a condition of Pollution in Receiving Waters. Federal regulations, 40 CFR 122.26(d)(2)(i), require the Permittees to control the discharge of Pollutants into the MS4 to the maximum extent practicable (MEP).

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1 Note: Acronyms and capitalized terms used in this document are defined in Appendix 4.
2 The State General Construction Permit Section Order No. 2009-0009-DWQ XIII

Certain activities and sources that generate Pollutants present in Urban Runoff may be beyond the ability of Permittees to prevent or eliminate. Examples of these activities and sources include, but are not limited to: emissions from internal combustion engines, brake pad wear and tear, atmospheric deposition, bacteria and wildlife (including feral cats and dogs) and leaching of naturally occurring nutrients and minerals from local soils. This Order is not intended to address background or naturally occurring Pollutants or flows.

D. The Permittees have identified Major Outfalls and have submitted maps of existing MS4 facilities. The Co-Permittees reported having approximately 269 miles of underground storm drains, and 95 miles of channels[3]. The RCFC&WCD reported having 75 miles in underground storm drains and 59 miles of channels in the Permit Area.

E. On February 5, 2008 Wildomar residents voted for cityhood and the city incorporated on July 1, 2008. Menifee residents voted for cityhood on June 3, 2008 and the city incorporated on October 1, 2008. Both cities in letters dated May 5 and May 6, 2009, respectively, have expressed their intent to be a Co-Permittee in this Order and for the purposes of this Order shall be considered as such. Urban Runoff from the cities of Menifee, Murrieta and Wildomar discharges into watersheds within the Santa Ana Regional Board and the San Diego Regional Board jurisdictions. Therefore, these cities are regulated by MS4 permits issued by both Regional Boards. Urban Runoff from the County of Riverside and RCFC&WCD discharge into watersheds within the Santa Ana, San Diego and Colorado River Region Regional Board jurisdictions. Therefore, these entities are regulated by MS4 permits issued by three Regional Boards.

F. The Permit Area contains 1,396 square miles or 19.1% of the 7,300 square miles within Riverside County and includes 15 of the 26 municipalities within Riverside County. The more densely populated areas of Riverside County are located within the Santa Ana Regional Board's jurisdiction. The population of the Permit Area was estimated at 1,237,388 as of January 1, 2006[4]. The California Department of Finance estimates that as of January 1, 2009, the population of Riverside County was 2,107,653[5]. Other portions of Riverside County are regulated by the San Diego and the Colorado River Basin Regional Boards.

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[3] 2008-2009 Permittee Santa Ana NPDES MS4 Annual Report.
[4] Section 3.3.1 of the 2007 ROWD (Western Riverside Council of Governments (WRCOG), Sub-regional Growth Forecast, Riverside County Projection (Revised Draft), November 22, 2006.)
[5] E-1 report dated April 30, 2009 (http://www.dof.ca.gov/research/demographic/reports/estimates/e-1/2008-09/documents/E-1_2009%20Press%20Release.pdf).

II. FINDINGS

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter the "Regional Board") finds that:

A. BACKGROUND

1. The Co-Permittees own and operate flood control facilities. Some of the natural channels, streambeds and other drainage facilities that are generally considered as Waters of the U.S. have been converted to flood control facilities. In such cases, where a natural streambed is modified to convey storm water flows, the conveyance system becomes both a MS4 and a Water of the US.

2. The Permittees are currently discharging from the MS4 pursuant to Order No. R8-2002-0011, NPDES Permit No. CAS 618033. This Order renews Order No. R8-2002-0011 and regulates discharges of Urban Runoff from the MS4 within Riverside County.

3. On April 27, 2007, the RCFC&WCD, in cooperation with the County of Riverside, (the "County") and the incorporated cities of Beaumont, Calimesa, Canyon Lake, Corona, Hemet, Lake Elsinore, Moreno Valley, Murrieta, Norco, Perris, Riverside, and San Jacinto, jointly submitted a permit renewal application, a Report of Waste Discharge (the "2007 ROWD"), to renew the NPDES permit for discharges of Urban Runoff from the MS4 in the Permit Area. Subsequently, the cities of Menifee and Wildomar also signed letters of intent to include discharges from their MS4 facilities under this MS4 Permit. The County and incorporated cities are hereinafter the "Co-Permittees", and collectively with the Principal Permittee referred to as the "Permittees". The Permit Area is shown in Appendix 1 and includes the urban areas and those portions of agriculture and open space as shown on Appendix 1 that may convert to industrial, commercial, or residential use during the term of this Order.

4. To more effectively carry out the requirements of this Order, the Permittees have agreed that the RCFC&WCD will continue as the Principal Permittee and the County and the incorporated cities within the Permit Area will continue as the Co-Permittees.

5. The Permittees submitted a revised Drainage Area Management Plan ("2007 DAMP") as contained in Appendix B of the 2007 ROWD. The proposed DAMP identifies programs and policies, including best management practices (BMPs), to achieve Water Quality Standards in the Receiving Waters. These BMPs can be organized into two categories: BMPs for existing facilities and BMPs for New Development and Significant Redevelopment. Both categories include regulatory activities, public education programs, waste management, and operations and

maintenance activities. The Permittees currently implement the 2006 DAMP. With the adoption of this Order, the Permittees are required to implement the 2007 DAMP. The DAMP is a dynamic document that defines the MEP standard (see discussion of this term in the Glossary, Appendix 4) for the Permittee activities and is incorporated by reference as an enforceable element of this Order.

6. This Order requires the Permittees to revise the DAMP and associated documents to incorporate new MS4 Permit requirements which include recommendations from the 2007 ROWD. Future modifications of the DAMP, once approved by the Regional Board Executive Officer[6], are also enforceable elements of this Order.

7. During the Third Term Permit, Regional Board staff conducted an evaluation of each of the Permittees' Urban Runoff programs. This evaluation indicated that most of the Permittees lacked proper documentation of procedures and policies for implementation of various elements of their Urban Runoff program. This Order requires each Permittee to develop a Local Implementation Plan (LIP) that documents its internal procedures for implementation of the various program elements described in the DAMP and this Order.

8. On July 13, 1990, the Regional Board adopted the first term Riverside County MS4 permit, Order No. 90-104 (NPDES No. CA 8000192). On March 8, 1996, the Regional Board renewed Order No. 90-104 by adopting the second term Riverside County MS4 permit, Order No. 96-30 (NPDES No. CAS618033). On October 25, 2002, the Regional Board renewed Order No. 96-30 by adopting the third term MS4 permit, Order No. R8-2002-0011(NPDES No. CAS618033).

9. This Order renews Order No. R8-2002-0011 (NPDES No. CAS618033), and regulates discharges of Urban Runoff from the MS4 within the Permit Area in Riverside County. This Order is the fourth term permit and is intended to regulate the discharge of Pollutants in Urban Runoff from non-agricultural Anthropogenic activities and sources under the jurisdiction of and/or maintenance responsibility of the Permittees and is not intended to address background or naturally occurring Pollutants or flows.

10. The Santa Ana River Basin is the major watershed within the Santa Ana Region. The Regional Board and the Permittees recognize the importance of watershed

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[6] The Executive Officer shall provide members of the public with notice and at least a 30-day comment opportunity for all documents submitted in accordance with this Order. If the Executive Officer, after considering timely submitted comments, concludes that the document is adequate or adequate with specified changes, the Executive Officer may approve the document or present it to the Board for its consideration at a regularly scheduled and noticed meeting. If there are significant issues that cannot be resolved by the Executive Officer, the document will be presented to the Board for its consideration at a regularly scheduled meeting.

management initiatives and regional planning and coordination in the development and implementation of programs and policies related to water quality protection.

11. It is recognized that in some cases MS4 facilities are used to convey Urban Runoff to sub-regional or regional Treatment Control BMPs or may incorporate regional BMPs directly. The Regional Board recognizes this appropriate strategy for treatment provided that Waters of the US are not used to convey Pollutants. Further, such BMPs are not considered MS4 or Waters of the US.

12. A number of regional and watershed-wide efforts are underway in which the Permittees are active participants. The Regional Board also recognizes that, in certain cases, diversion of funds targeted for certain monitoring programs to regional monitoring programs may be necessary. The Executive Officer is authorized to approve, after proper public notification and consideration of all comments received, reallocation of resources to the watershed management initiatives and regional planning and coordination programs and regional monitoring programs.

13. The Permittees are required to submit all documents, where appropriate, to the Regional Board in an electronic format. All such documents will be posted at the Regional Board's website and all interested parties will be notified. In addition, the website will include the administrative and civil procedures for appealing any decision made by the Executive Officer. Some Urban Runoff issues, such as monitoring, public education, and training can be more effectively addressed on a regional or statewide basis thereby increasing program consistency and efficiency. This Order encourages continued participation in such programs and policies.

B. LEGAL AUTHORITIES

1. This Order Is issued pursuant to Section 402 of the CWA, the Porter-Cologne Water Quality Control Act (Division 7 of the Water Code, commencing with Section 13000), applicable State and federal regulations, all applicable provisions of statewide Water Quality Control Plans and Policies adopted by the State Water Resources Control Board (State Board), the Water Quality Control Plan for the Santa Ana River Basin adopted by the Regional Board (Basin Plan), the California Toxics Rule (CTR), and the California Toxics Rule Implementation Plan. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to Article 4, Chapter 4, Division 7 of the Water Code (commencing with Section 13260).

2. This Order is consistent with the following precedential Orders adopted by the State Board addressing municipal storm water NPDES Permits: Order 99-05-DWQ (Petition of Environmental Health Coalition/Receiving Water Limitation Language for Municipal Storm Water Permits), Order WQ-2000-11 (Petitions Bellflower, City of Arcadia, Western States Petroleum Association, Review of RWQCB and Its

Executive Officer Pursuant to Order 96-054, Permit for Municipal Storm Water and Urban Run-Off Discharges within Los Angeles County), Order WQ 2001-15 (In the Matter of the Petitions of Building Industry Association of San Diego County and Western States Petroleum Association), and Order WQO 2002-0014 (Petitions of Aliso Viejo, et al/Order to stay provision F.5.f of the permit and part of last sentence of Finding 26, permit issued by San Diego Regional Water Quality Control Board).

3. Consistent with the State Board's orders, this Order requires the Permittees to comply with the applicable Water Quality Standards, which is to be achieved through an iterative approach requiring the implementation of increasingly more effective BMPs until Water Quality Standards are not impaired by Urban Runoff. All MS4 permits issued in California specify certain minimum BMPs and incorporate an iterative process that requires increasingly more effective BMPs if the Water Quality Standards are not met.

4. The federal Clean Water Act established a national policy designed to help maintain and restore the physical, chemical and biological integrity of the nation's waters. In 1972, the CWA established the NPDES permit program to regulate the discharge of Pollutants from Point Sources to Receiving Waters. From 1972 to 1987, the main focus of the NPDES program was to regulate conventional Pollutant sources such as sewage treatment plants and industrial facilities. As a result, on a nationwide basis, non-point sources, including agricultural runoff and Urban Runoff, now contribute a larger portion of many kinds of Pollutants than the more thoroughly regulated sewage treatment plants and industrial facilities.

5. Studies conducted by the USEPA, the states, counties, cities, flood control districts and other entities dealing with Urban Runoff indicate that the following are major sources of Urban Runoff Pollution nationwide:

   a. Industrial Facilities where appropriate Pollution Prevention and BMPs are not implemented;

   b. Construction Sites where erosion and sediment controls and BMPs are not implemented; and,

   c. Runoff from urbanized areas.

6. The 1987 amendments to the CWA added Section 402(p) that required the USEPA to develop permitting regulations for storm water discharges from MS4 and from Industrial Facilities, including construction sites. The USEPA promulgated the final Phase I storm water regulations on November 16, 1990. Neither the 1987 amendments to the CWA nor the Phase I storm water regulations (40 CFR Part 122) have been amended since their effective dates.

7. Prior to the USEPA's promulgation of the final storm water regulations, three counties (Orange, Riverside, and San Bernardino) and their incorporated cities located within the Regional Board's jurisdiction requested area-wide NPDES MS4 permits. These area-wide MS4 NPDES permits are:

   a. Orange County, NPDES No. CAS 618030

   b. Riverside County, NPDES No. CAS 618033

   c. San Bernardino County, NPDES No. CAS 618036

8. Consistent with the CWA and the USEPA regulations promulgated pursuant thereto, the State Board and the Regional Board have adopted a number of permits to address Pollution from the sources identified in Finding 5, above. Industrial activities (as defined in 40 CFR 122.26(b)(14)) including construction activities on one or more acres are to be covered under one of the following permits and those individuals or entities that engage in such activities are required to secure permission to engage in such identified activities pursuant to the provisions of one of the following permits:

   a. State Board Order No. 97-03-DWQ, for storm water runoff from industrial activities (NPDES No. CAS000001), (the "General Industrial Activities Storm Water Permit").

   b. State Board Order No. 99-08-DWQ, for storm water runoff from construction activities (NPDES No. CAS000002), (the "General Construction Activity Storm Water Permit"). Order No. 99-08- DWQ was amended by State Board Resolution No. 2001-046 on April 26, 2001, to incorporate monitoring provisions as directed by the Superior Court, County of Sacramento. This Order was renewed on September 2, 2009 by State Board Order No. 2009-0009-DWQ. The requirements of Order No. 2009-0009-DWQ will be effective July 1, 2010.

   c. State Board Order No. 99-06-DWQ (NPDES No. CAS000003) for storm water runoff from facilities (including freeways and highways) owned and/or operated by the California Department of Transportation ("Caltrans").

   d. State Board Order No. 2003-0007-DWQ, for discharges of storm water runoff associated with small linear underground/overhead construction projects (NPDES No. CAS000005), (the "General Permit-Small Linear Underground Projects). After July 1, 2010, most linear construction projects will be regulated under State Board Order No. 2009-0009-DWQ.

   e. The Regional Board also issues individual storm water NPDES permits for certain Industrial Facilities within the Santa Ana River watershed. Currently

there is only one individual storm water NPDES permit that has been issued by the Regional Board for an Industrial Facility (March Air Reserve Base) located within the Permit Area. Additionally, the Regional Board has issued NPDES permits for a number of facilities that discharge process wastewater and storm water; storm water discharge requirements are included in such a facility's NPDES permit.

9. Section 402(p) of the CWA establishes two different performance standards for storm water discharges. NPDES MS4 permits require controls to reduce the discharge of Pollutants to the MEP. NPDES permits issued for industrial storm water discharges (including construction activities) must meet Best Available Technology (BAT) and Best Conventional Pollutant Control Technology (BCT) standards. The CWA and the USEPA regulations allow each state the flexibility to decide what constitutes the MEP.

10. This Order does not constitute an unfunded mandate subject to subvention under Article XIII.B, Section (6) of the California Constitution for several reasons, including the following:

    a. This Order implements federally mandated requirements under CWA Section 402(p)(3)(B). (33 USC § 1342(p)(3)(B)).

    b. The Permittees' obligation under this order are similar to, and in many respects less stringent than, the obligations of non-governmental dischargers who are issued NPDES permits for storm water discharges.

    c. The Permittees have the authority to levy service charges, fees, or assessments to pay for compliance with this Order[7].

    d. The Permittees requested permit coverage in lieu of compliance with the complete prohibition against the discharge of Pollutants contained in federal Clean Water Act Section 301, subdivision (a). (33 USC § 1311(a)).

11. Section 13225 of the CWC identifies the Regional Board as being the enforcement authority for NPDES permits, including the Industrial General Permit, and the Construction General Permit which are collectively referred to as the "General Stormwater Permits." However, in many areas, the Industrial Facilities and Construction Sites discharge directly into MS4 facilities owned and operated by the Permittees. These Industrial Facilities and Construction Sites are also regulated under local ordinances and regulations. The Permittees and Regional Board staff work together to avoid duplicative efforts in regulating these facilities. As part of

[7] Voter approval may be required for new tax levies.

this coordination, the Permittees have been notifying Regional Board staff when they observe, during their routine activities, conditions that result in a threat or potential threat to water quality, or when a required Industrial Facility or Construction Site fails to obtain coverage under the appropriate General Stormwater Permit.

12. This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code Sections 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. Sections 1531 to 1544). This Order requires compliance with Effluent Limits, Receiving Water Limits, and other requirements to protect the Beneficial Uses of Waters of the US. The Permittees are responsible for meeting all requirements of the applicable Endangered Species Act.

13. The Permittees may petition the Regional Board to issue a separate NPDES permit to any discharger of Non-storm Water into MS4 facilities that they own or operate.

14. The Regional Board has considered anti-degradation requirements, pursuant to 40 CFR 131.12 and State Board Resolution No. 68-16, for this discharge. The Regional Board finds that the Urban Runoff regulated under this Order is consistent with the federal and state anti-degradation requirements and a complete anti-degradation analysis is not necessary. This Order requires the continued implementation of programs and policies to reduce the discharge of Pollutants in Urban Runoff. This Order includes additional requirements to control the discharge of Pollutants in Urban Runoff from "Significant Redevelopment," and "New Development," as defined in Finding II.G. and Section XII of this Order.

C. RATIONALE FOR REQUIREMENTS

1. The Regional Board developed the requirements in this Order based on information submitted as part of the 2007 ROWD (including the 2007 DAMP), monitoring and reporting data, program audits, and other available information and consistent with the CWA, CWC and regulations adopted thereunder.

2. The Fact Sheet (Appendix 6) which contains additional background information and rationale for requirements specified in this Order is hereby incorporated into this Order and constitutes part of the Findings for this Order. Appendices 1 through 5 and 7 are also incorporated into this Order.

D. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

1. Under Water Code Section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code Sections 21100 -21177 (*County of Los Angeles v. California State Water Resources Control Board* [2006] 142 Cal Appl. 4th 985, mod. [Nov. 6, 2006, B184034] 50 Cal. Rptr 3rd 619, 632-636). This action also involves the re-issuance of WDRs for existing facilities and as such, is exempt from the provisions of CEQA (commencing with Section 21100) in that the activity is exempt pursuant to Title 14 of the California Code of Regulations Section 15301.

2. Compliance with this Order and the DAMP does not necessarily constitute mitigation that is sufficiently specific to satisfy the requirements of CEQA with regards to projects. The intent of the DAMP, WQMP, Storm Water Pollution Prevention Plan (SWPPP) and other programs and policies incorporated into this order is to minimize the impacts from a specific project to a level that is below significance as defined in CEQA.

E. DISCHARGE CHARACTERISTICS

1. This Order regulates Urban Runoff from areas under the jurisdiction of the Permittees. The term Urban Runoff as used in this Order includes storm water runoff, snowmelt runoff and surface runoff and drainage as defined in Appendix 4.
2. Pollutants in Urban Runoff can threaten and adversely affect human health and the environment. Human illnesses have been clearly linked to recreating near storm drains flowing into coastal waters[8]. Also, Pollutants in Urban Runoff can bioaccumulate in receiving waters in the tissues of invertebrates and fish and eventually consumed by humans and other animals.
3. Urban Runoff can carry Pollutants described in the Fact Sheet to rivers, streams, and lakes within the Permit Area (collectively the "Receiving Waters"). In addition, although infrequently, Urban Runoff from the Permit Area can carry these Pollutants to other receiving waters such as the Pacific Ocean.
4. Management of Dry Weather discharges resulting from urbanization provides an opportunity to promote water conservation as well as address water quality.
5. The Co-Permittees discharge Urban Runoff into lakes, drinking water reservoirs, rivers, streams, creeks, and tributaries thereto within the Upper Santa Ana River, Middle Santa Ana River, and San Jacinto hydrologic units within the Santa Ana Region, as shown in Tables 3a and 3b. Some of the Receiving Waters have been designated as Impaired by the Regional Board and the USEPA pursuant to CWA Section 303(d).

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[8] The Santa Monica Bay Restoration Project, Epidemiology Study, 1996.

Table 3a – Receiving Waterbodies and Municipal Dischargers:

	Upper Santa Ana									San Jacinto								
Municipality	**Mill Creek Prado Area**	**Chino Creek, Reach 1A**	**Chino Creek, Reach 1B**	**Temescal Creek**	**San Timoteo Wash**	**Little San Gorgonio**	**Santa Ana River, Reach 3**	**Santa Ana River, Reach 4**	**Cucamonga Creek**	**San Jacinto River reaches 1-4**	**Lake Elsinore**	**Canyon Lake**	**Strawberry Creek**	**Lake Hemet**	**Salt Creek**	**Poppet Creek**	**Indian Creek**	**Bautista Creek**
RCFC&WCD				◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Beaumont					◆	◆	⋇	⋇		◆	⋇		◆					
Calimesa					◆	⋇	⋇	⋇		◆	⋇	◆	◆					
Canyon Lake				⋇			⋇			⋇	⋇	◆						
Corona				◆			⋇											
County of Riverside (County)	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Hemet				⋇			⋇			⋇	⋇	⋇			⋇			
Lake Elsinore				◆			⋇			⋇	◆							
Menifee				⋇			⋇			⋇	⋇	⋇			⋇			
Moreno Valley				⋇			⋇			⋇	⋇	⋇						
Murrieta				⋇			⋇				⋇							
Norco				⋇			◆											
Perris				⋇			⋇			◆	⋇	⋇			⋇			
Riverside				⋇			◆	◆			⋇							
San Jacinto										◆	⋇	⋇						
Wildomar				⋇			⋇				⋇							

◆ Direct Discharge of MS4 to Receiving Water
⋇ Tributary to Receiving Water

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Table 3b. Beneficial Uses and 2006 CWA Section 303(d) Impaired Waters

Watershed Management Areas in Riverside County	Hydraulic Unit	Beneficial Uses
Upper Santa Ana River		
Santa Ana River, Reach 3,	801.21, 801.25, 801.27,	AGR, GWR, REC1, REC2, WARM, WILD, RARE, SPWN
Santa Ana River, Reach 4	801.27, 801.44	GWR, REC1, REC2, WARM, WILD, SPWN
Temescal Creek – Reach 1	801.25	REC1, REC2, WARM, WILD
Temescal Creek – Reach 2	801.32, 801.25	INTERMITTENT - AGR, IND, GWR, REC1, REC2, LWARM
Temescal Creek – Reach 3 **See Lee Lake**		
Temescal Creek – Reach 4	801.34	RARE, INTERMITTENT - AGR, GWR, REC1, REC2, WARM, WILD
Temescal Creek – Reach 5	801.35	AGR, GWR, REC1, REC2, WARM, WILD, RARE
Temescal Creek – Reach 6	801.35	INTERMITTENT - GWR, REC1, REC2, WARM, WILD
Coldwater Canyon Creek	801.32	MUN, AGR, GWR, REC1, REC2, WARM, WILD
Bedford Canyon Creek	801.32	INTERMITTENT - GWR, REC1, REC2, WARM, WILD
Dawson Canyon Creek	801.32	MUN, GWR, REC1, REC2, WARM, WILD
Day Creek	801.21	MUN,PROC, GWR, REC1, REC2, COLD, WILD
San Sevaine Creek	801.21	INTERMITTENT - MUN, GWR, REC1, REC2, COLD, WILD
San Timoteo Wash Reach 3	801.62	IGWR, REC1, REC2, WARM, WILD, RARE
Little San Gorgonio Creek & Tributaries	801.62, 801.63, 801.69	MUN, GWR, REC1, REC2, COLD, WILD
Sunnyslope Channel	801.27,	MUN, REC1, REC2, WARM, WILD, SPWN
Tequesquite Arroyo (Sycamore Creek)	801.27,	GWR, REC1, REC2, WARM, WILD, SPWN
Chino Basin/ Middle Santa Ana		
Chino Creek, Reach 1A	801.21	REC1, REC2, WARM, WILD, RARE
Chino Creek, Reach 1B	801.21	REC1, REC2, WARM, WILD, RARE
Mill Creek (Prado Area)	801.25	REC1, REC2, WARM, WILD, RARE
Cucamonga Creek – Reach 1	801.21	GWR, REC1, REC2, LWARM, WILD

Watershed Management Areas in Riverside County	Hydraulic Unit	Beneficial Uses
San Jacinto San Jacinto River reaches 1 and 6	802.31, 802.32 & 802.21	INTERMITTENT - MUN, AGR, GWR, REC1, REC2, WARM, WILD
San Jacinto San Jacinto River reaches 3-5	802.11, 802.14, 802.21,	INTERMITTENT - AGR, GWR, REC1, REC2, WARM, WILD
San Jacinto San Jacinto River reach 2 **See Canyon Lake**		
San Jacinto San Jacinto River reach 7	802.21	MUN, AGR, GWR, REC1, REC2, COLD, WILD
- Bautista Creek	802.21, 802.23	MUN, AGR, GWR, REC1, REC2, COLD, WILD
Strawberry Creek	802.21	MUN, AGR, GWR, REC1, REC2, COLD, WILD
Fuller Mill Creek	802.22	MUN, AGR, GWR, REC1, REC2, COLD, WILD
Stone Creek	802.21	MUN, AGR, GWR, REC1, REC2, COLD, W ILD
Salt Creek	802.12	INTERMITTENT - REC1, REC2, WARM, WILD
Logan, Black Mtn, Juaro Canyon, Indian, Hurkey, Poppet and Protrero Creeks, and other Tributaries to these Creeks	802.21, 802.22	INTERMITTENT - MUN, AGR, GWR, REC1, REC2, WARM, WILD
Lakes		
Lake Elsinore	802.31	REC1, REC2, WARM, WILD
Canyon Lake	802.11	MUN, AGR, GWR, REC1, REC2, WARM, WILD
Lake Hemet	802.22	MUN, AGR, GWR, POW, REC1, REC2, WARM, COLD, WILD, SPWN
Lake Fulmor	802.21	MUN, AGR, REC1, REC2, WARM, COLD, WILD
Lake Perris	802.11	MUN, AGR, IND, PROC, GWR, REC1, REC2, COMM, WARM, COLD, WILD
Lake Evans	801.27	REC1, REC2, WARM, COLD, WILD
Lake Mathews	801.33	MUN, AGR, IND, PROC, GWR, REC1, REC2, WARM, WILD, RARE
Lee Lake	801.34	AGR, IND, GWR, REC1, REC2, WARM, WILD
Mockingbird Reservoir	801.26	AGR, REC1, REC2, WARM, WILD

AGR: Agricultural Supply; MUN: Municipal and Domestic Supply; GWR: Groundwater Recharge; IND – Industrial Service Supply, POW – Hydropower generation, REC1: Water Contact Recreation; REC2: Non-Contact Water Recreation; WARM: Warm Freshwater Habitat; LWARM: Limited Warm Freshwater Habitat, COLD - Cold freshwater habitat, WILD: Wildlife Habitat, RARE – Rare threatened or endangered species. SPWN – Spawning, reproduction and development waters.

6. Urban Runoff is defined in the Glossary (Appendix 4). It includes those discharges from residential, commercial, industrial, and construction areas within the Permit Area and excludes discharges from Open Space[9], feedlots, dairies, farms and agricultural fields. Urban Runoff consists of storm water and "authorized non-storm water" (see Section VI) surface runoff from drainage sub-areas with various, often mixed, land uses within all of the hydrologic drainage areas that discharge into the Receiving Waters. In addition to Urban Runoff, the MS4 regulated by this Order receives flows from Open Space, agricultural activities, state and federal properties and other non-urban land uses not under the control of the Permittees. The quality of the discharges from the MS4 varies considerably and is affected by, among other things, past and present land use activities, basin hydrology, geography and geology, season, the frequency and duration of storm events, and the presence of past or present illegal and allowed disposal practices and Illicit Connections.

7. Pathogens (from sanitary sewer overflows, septic system leaks, and spills and leaks from portable toilets, pets, wildlife, and human activities) can impact water contact recreation and non-contact water recreation. Floatables (from trash) are an aesthetic nuisance and can be a substrate for algae and insect vectors. Oil and grease can coat birds and aquatic organisms, adversely affecting respiration and/or thermoregulation. Other petroleum hydrocarbon components may cause Toxicity to aquatic organisms and may impact human health. Suspended and settleable solids (from sediment, trash, and industrial activities) may be deleterious to benthic organisms and may cause anaerobic conditions to form. Sediments and other suspended particulates may cause turbidity, clog fish gills and interfere with respiration in aquatic fauna. They may also screen out light, hindering photosynthesis and normal aquatic plant growth and development. However, it is recognized that storm flows from non-urbanized areas such as national forest, state parks, wilderness, and agriculture, as shown on Appendix 1, naturally exhibit high levels of suspended solids due to climate, hydrology, geology and geography.[10] Toxic Substances from pesticides, petroleum products, metals, and industrial wastes can cause acute and/or chronic Toxicity, and can bioaccumulate in organisms to levels that may be harmful to human health. Nutrients (from fertilizer use, fire fighting chemicals, decaying plants, confined animal facilities, pets, and wildlife) may cause excessive algal blooms. These blooms may lead to problems with taste, odor, color and increased turbidity, and may depress the dissolved oxygen content, leading to fish kills.

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[9] Only includes Open Space in strictly unurbanized areas. See Glossary definition of Urban Runoff.
[10] Riverside County Flood Control and Water Conservation District's "Hydrology Manual," dated April 1978 and page II-4 of "Santa Ana River, Design Memorandum No. 1, Phase II GDM on the Santa Ana River Mainstem, including Santiago Creek, Volume 2, Prado Dam." dated August 1988 and D.I. Inman & S.A. Jenkins "Climate Change and the Episodicity of Sediment Flux in Small California Rivers," Journal of Geology, Volume 107, pp. 251-270, 1999.

8. Bacteria and nutrients are the Pollutants of Concern for a majority of the inland waters that are listed under the 303(d) list of Impaired Waterbodies or an adopted Total Maximum Daily Load (TMDL). This Order requires the Permittees to identify sources of bacteria and nutrients in Urban Runoff to their MS4 and to control those Pollutant sources.

9. Recent information[11] shows that plastic wastes and materials released to surface water bodies can harm aquatic species by entanglement or ingestion. This Order requires the Permittees to consider facilities that handle nurdles[12] as a high priority site for inspection, and outreach. Nurdles are a major contributor to marine debris. During a three month study of Orange County researchers found them to be the most common beach contaminant[13]. Nurdles comprised roughly 98% of the beach debris collected in a 2001 Orange County study.

10. The Permittees' water quality monitoring data submitted to date document a number of exceedances of Water Quality Objectives for various Urban Runoff-related Pollutants (fecal coliform bacteria, nutrients, total suspended solids, turbidity, metals, etc.) at various watershed monitoring stations.

11. This Order includes requirements for control of Dry Weather flows from Permittee activities that may cause an exceedance of Water Quality Objectives in Receiving Waters for Total Dissolved Solids (TDS) or total inorganic nitrogen (TIN). Storm water was considered to be an insignificant source for nitrogen/TDS in groundwater.

12. The Permittees' 2003-2004, 2004-2005, 2005-2006, 2006-2007 and 2007-2008 Annual Reports indicate exceedances of Water Quality Objectives for each core MS4 monitoring station discussed in a through g, below. The Permittees have identified nutrients and bacteria as priority constituents for initial corrective actions.

    a. Corona Storm Drain (40) - Six samples were collected and analyzed for fecal coliforms. Three samples were collected in the Dry Season and three during Wet Weather events. All samples analyzed exceeded bacteria (as fecal coliform) Water Quality Objectives with a maximum value of 160,000 MPN fecal coliforms. Boron analyses exceeded Water Quality Objectives of 0.75 mg/L in

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[11] http://www.bestlifeonline.com/cms/publish/health-fitness/Our_oceans_are_turning_into_plastic_are_we_2_printer.shtml, (alternative reference: http://rstb.royalsocietypublishing.org/search?fulltext=entanglement+and+ingestion&sortspec=date&submit=Submit&andorexactfulltext=phrase)

[12] A nurdle is a plastic pellet, also known as pre-production plastic pellet or plastic resin pellet.

[13] Moore, Charles (2002). "A comparison of neustonic plastic and zooplankton abundance in Southern California's coastal waters and elsewhere in the North Pacific". *Algalita Marine Research Foundation.* http://www.mindfully.org/Plastic/Ocean/Marine-Debris-Panel30oct02.htm.

one out of eighteen samples collected (0.78 mg/L). Six samples were collected and analyzed for Total Dissolved Solids (TDS) in 2003-2004. All samples were below the Temescal Creek and Santa Ana River Reach 3 Water Quality Objectives of 800 mg/L/700 mg/L TDS (respectively) and only one (11 mg/L) of ten samples (2005-2008) exceeded the 10 mg/L total nitrogen objective.

b. Sunnymead Channel (316) - Three samples were collected during Wet Weather events and analyzed for fecal coliforms in this time frame. All samples were greater than 5000 MPN and exceeded bacteria Water Quality Objectives of 200 or 400 MPN fecal coliforms. Two samples were collected during Wet Weather events and analyzed for TDS and were below the Water Quality Objective of 700 mg/L for Canyon Lake. Total nitrogen values in all ten samples collected during Wet Weather events were below the Water Quality Objective of 8 mg/L.

c. Hemet Channel (318) - All four Wet Weather samples were detected at greater than 7000 MPN and exceeded the bacteria Water Quality Objective of 200 or 400 MPN for fecal coliforms. As Salt Creek does not have numeric objectives for TDS, the Receiving Water for Salt Creek is Canyon Lake with an objective of 700 mg/L TDS. All eighteen samples collected during Wet Weather events and analyzed for TDS were below the Canyon Lake Water Quality Objective. Total nitrogen values in all nine samples collected during Wet Weather events were below the Water Quality Objective of 8 mg/L.

d. Magnolia Center (364) – Eleven out of thirteen samples (3-Wet Weather samples [>160000 MPN maximum concentration] and 10 dry [5000 MPN maximum]) collected exceeded the Water Quality Objective for fecal coliform (200 or 400 MPN MPN). Two (both collected during Wet Weather events) out of thirty-four samples identified total nitrogen concentrations in excess of the 10 mg/L Water Quality Objective. The maximum concentration measured was 13 mg/L. Water Quality Objective of 700 mg/L TDS were exceeded in three out of eight samples analyzed. The maximum TDS concentration was 930 mg/L TDS.

e. University Wash Channel (702) – All three samples were detected at greater than 5000 MPN concentration and exceeded the fecal coliform Water Quality Objectives of 200 or 400 MPN. The maximum concentration was 13,000 MPN. One (11 mg/L) out of sixteen samples analyzed for total nitrogen was above the Santa Ana River Reach 4 Water Quality Objective of 10 mg/L. Ten samples analyzed for TDS were below Water Quality Objective of 550 mg/L.

f. North Norco Channel (707) – Three out of four samples (>16000 MPN maximum) analyzed for fecal coliform exceeded bacteria Water Quality Objective of 200 or 400 MPN fecal coliform. Three (1300 mg/L maximum concentration dry, 900 mg/L wet) out of four samples analyzed for TDS were above the Santa Ana River-Reach 3 Water Quality Objective of 700 mg/L. Two

samples were Dry Weather and two samples were Wet Weather. One out of ten samples analyzed for total nitrogen exceeded the Water Quality Objective of 10 mg/L for total nitrogen.

g. Perris Line J Channel (752) – All four Wet Weather samples analyzed exceeded bacterial indicator Water Quality Objective the highest value was 13,000 MPN fecal coliform. Two of four samples analyzed for TDS exceeded the Water Quality Objective of 700 mg/L for Canyon Lake. One out of twelve samples analyzed exceeded the Water Quality Objective of 8 mg/L for total nitrogen.

13. The Permittees are participating in several studies in conjunction with the Storm Water Monitoring Coalition (SMC), Storm Water Quality Standards Task Force, the Lake Elsinore and Canyon Lake TMDL Task Force, the Middle Santa Ana River TMDL Task Force and Southern California Coastal Water Research Project (SCCWRP) to address the elevated fecal bacterial indicator levels. Also, the Permittees are anticipating that the use of fecal bacterial indicator will be changed to E. coli and the reclassification of REC uses for several MS4 facilities in the near future. However, E. coli data still indicates Water Quality Objective exceedances that will need to be addressed as part of the TMDL.

14. The above monitoring results, the 303(d) list of Impaired Waterbodies and the approved TMDLs indicate that bacterial contamination is one of the persistent problems in Urban Runoff. TMDL Implementation Plans including Urban Runoff Waste Load Allocations (WLAs) have been adopted by the Regional Board for the Middle Santa Ana River to address this problem. It should be noted, however, that the work of the Storm Water Quality Standards Task Force is likely to result in changes to Recreational Water Quality Objectives and implementation measures, including the suspension of recreational standards during high flow events. Further, some MS4 facilities may be recategorized as REC 2 or REC X (REC 1 nor REC 2) pursuant to Use Attainability Analyses (UAAs). These changes will likely allow the Permittees to focus their TMDL compliance resources on bacterial contamination that is affecting recreational swimming areas used during the Dry Season as the highest priority.

15. The Santa Ana River is the major Receiving Water in the Permit Area. During non-storm periods the flow in the River is dominated by effluent from POTW discharges. POTW discharges are regulated under NPDES permits issued by the Regional Board. In addition, the quality of the Santa Ana River within the Upper Santa Ana sub-watershed is greatly influenced by runoff from agricultural activities. Urban Runoff from the Permit Area constitutes a minor component of the Dry Weather flow in the Upper Santa Ana and San Jacinto sub-watersheds of the Santa Ana River. However, Urban Runoff may be more polluted than POTW discharges and therefore a more significant concern based on monitoring results identified in the Annual Reports.

F. CWA SECTION 303(D) LISTED WATERBODIES AND TMDLS (ALSO SEE SECTION K)

1. Water quality assessment conducted by Regional Board staff has identified a number of Beneficial Use Impairments due, in part, to Urban Runoff. Section 305(b) of the CWA requires the USEPA and each state that has been delegated NPDES permitting authority to routinely monitor and assess the quality of waters of their respective regions. If this assessment indicates that Beneficial Uses are not met, then that waterbody must be listed under Section 303(d) of the CWA as an Impaired Waterbody.
2. Based on the Regional Board's 2006[14] water quality assessment a number of water bodies within the Permit Area are listed (see Table 4, below) as Impaired pursuant to Section 303(d).

Table 4 - Impaired Waterbodies

Waterbody	Pollutant	Potential Sources	Proposed TMDL Completion
Santa Ana River, Reach 3,	Pathogens	Dairies	Approved 2007
Canyon Lake	Nutrients	Non-point Source	Approved 2005
	Pathogens	Non-point Source	Listing under evaluation
Lake Elsinore	Nutrients	Non-point Source	Approved 2005
	Unknown Toxicity	Unknown	2021
	PCBs	Unknown Non-point Source	2019
Lake Fulmor	Pathogens	Unknown Non-point Source	2019
Santa Ana River, Reach 4	Pathogens	Non-point Source	2019

3. Federal regulations require that a total maximum daily load (TMDL) be established for each 303(d) listed waterbody for each of the Pollutants causing Impairment. The TMDL is the total amount of a Pollutant that can be discharged to a subject waterbody, while still enabling the waterbody to attain Water Quality Standards in

[14] On April 24, 2009, the Regional Board adopted Resolution No. R8-2009-0032 approving the CWA Section 305(b) Integrated Report/CWA Section 303(d) List of Impaired Waterbodies. Minor additional modifications were approved by the Regional Board on October 23, 2009. When the revised list is approved by the State Board and the USEPA, the 2006 list will be updated.

the receiving water. Attaining Water Quality Standards means that the receiving waterbody's Water Quality Objectives are met and its Beneficial Uses are protected. The TMDL is the sum of the individual WLAs for point source inputs, Load Allocations (LAs) for Non-Point Source inputs and natural background, and a margin of safety. The TMDLs are one of the bases for limitations established in Waste Discharge Requirements.

4. The Basin Plan amendment incorporating the Middle Santa Ana River Watershed Bacterial Indicator TMDLs (MSAR TMDL) was approved by the Regional Board on August 26, 2005 (Resolution No. R8-2005-0001), by the State Board on May 15, 2006, by the state's Office of Administrative Law on September 1, 2006, and by the USEPA on May 16, 2007.

5. The MSAR TMDL established limits for Bacterial source Indicators for Santa Ana River (Reach 3), Chino Creek (Reaches 1 and 2), Prado Park Lake, Mill Creek (Prado Area), and Cucamonga Creek (Reach 1). The MSAR TMDLs Implementation Plan identifies three sub-watersheds in Riverside County that drain to the Santa Ana River, Reach 3: 1) Riverside Watershed - Contributes surface drainage generally westward from the City of Riverside to the Santa Ana River; 2) Temescal Canyon watershed - Contributes surface drainage generally northward to Temescal Creek and then to the Santa Ana River; and 3) Chino Basin - The southeastern portion of the Chino Basin drains generally south to the Santa Ana River in Riverside County.

6. The MSAR TMDLs specifies WLAs for Urban Runoff, and discharges from concentrated animal feeding operations. LAs are specified for runoff from other types of agriculture and from natural sources (open space/undeveloped forest land). WLAs and LAs are specified for both Dry Season discharges and Wet Season discharges, with separate compliance dates. To protect REC1 Beneficial uses, the TMDL has WLAs for fecal coliform and *E. coli*. The Basin Plan currently does not have an established Water Quality Objective for *E. coli*. Stakeholders in the Santa Ana Region have formed the Storm Water Quality Standards Task Force (SWQSTF) to evaluate USEPA's bacterial indicator recommendations and appropriate recreational beneficial use designations for waterbodies throughout the Region. The SWQSTF is expected to make recommendations for the adoption of alternative bacterial indicators such as *E.coli,* based on USEPA's "Ambient Water Quality Criteria for Bacteria - 1986". These and other recommendations of the SWQSTF are likely to result in changes to recreational Water Quality Objectives.

7. The MSAR TMDL Implementation Plan assigns responsibilities to specific MS4 dischargers to identify sources of impairment, to propose BMPs to address those sources, and to monitor, evaluate, and revise BMPs as needed, based on the effectiveness of the BMP implementation program. These are generally considered as the short-term solutions. The MSAR Permittees are required to develop and

implement a long-term solution (a Comprehensive Bacteria Reduction Plan (CBRP)) designed to achieve compliance with the WLAs by the dates specified in the TMDLs. Specific Implementation Plan tasks are described in Chapter 5 of the Basin Plan and are assigned to one or more of the Permittees. Requirements of the TMDL Implementation Plan tasks are incorporated into this Order. A number of these Implementation Plan tasks are also jointly assigned to non-Permittee stakeholders. The stakeholders have established TMDL task forces to jointly implement and coordinate the TMDL Implementation Plan tasks.

8. The MSAR TMDL Task Force members are listed in Table 5.

Table 5 - Middle Santa Ana River Bacterial Indicator TMDL Task Force

MS4 Permittees	Non-MS4 Permittees
Corona, City of	Santa Ana Watershed Project Authority
Norco, City of	US Department of Agriculture, Forest Service
Riverside, City of	Ag Pool, Milk Producers Council
Riverside, County of	Region 4 MS4 Permittees - Claremont and Pomona (pending formal agreement)
RCFC&WCD	Regional Board
San Bernardino County Flood Control District (representing the County of San Bernardino and the municipalities named in the TMDL)[(San Bernardino County, and the Cities of Chino, Chino Hills, Fontana, Montclair, Ontario, Rancho Cucamonga, Rialto and Upland)]	

9. Pursuant to Task 3 of the MSAR TMDL, on June 29, 2007, the Regional Board approved the monitoring program (Resolution No. R8-2007-0046) proposed by the TMDL Task Force. Pursuant to Task 4 of the MSAR TMDL, on April 18, 2008, the Regional Board approved the Urban Source Evaluation Plan (USEP) that included a BMP effectiveness study (Resolution No. R8-2008-0044) proposed by the TMDL Task Force. This Order requires the Permittees on the Task Force to continue to implement the approved monitoring program and the USEP.

10. A BMP effectiveness study was completed as part of the MSAR Watershed–Wide and BMP effectiveness components of the Middle Santa Ana River Water Quality Monitoring Plan (dated April 3, 2008). The results of this study will be incorporated into a BMP selection criteria that will be used as a guide to address bacterial indicator sources within the MSAR watershed. The Principal Permittee plans to conduct a phase 2 study at its Low Impact Development (LID) testing facility to evaluate the effectiveness of several LID-based BMPs, which will further guide BMP selection in the MSAR watershed.

11. As part of Task 4.1, the MSAR Permittees completed the first phase of the approved USEP (Resolution No. R8-2008-0044) and the report is currently under review by Regional Board staff. Several discrete sources of bacterial indicator were identified, controlled, or eliminated as a result of this effort. Based on the outfall monitoring data collected to date, additional sites are identified, monitored and prioritized yearly for further evaluation in the next phases of the USEP. The next phase of the USEP that will focus on an implementation plan to retrofit BMPs to address elevated bacterial indicators from urban drainage areas flowing into Mill Creek and Cucamonga Creek in San Bernardino County is currently being evaluated.

12. Consistent with Task 4.3, this Order requires the Permittees to revise the DAMP to incorporate the results of the USEP and/or other studies. The DAMP revisions shall include schedules for meeting the bacterial indicator WLAs based on the schedule established in the MSAR TMDLs and the results of the USEP and/or other studies. These revisions shall also provide a proposal and schedule for 1) evaluating the effectiveness of BMPs and other control actions implemented and 2) evaluating compliance with the bacterial indicator WLAs for Urban Runoff by initiating a WLA pre-compliance evaluation monitoring program[15].

13. Pursuant to Task 4.5, the Permittees are required to revise the Water Quality Management Plan to incorporate BMPs as per the USEP, Task 4.1, for New Development and Significant Redevelopment Projects.

14. The Permittees are required to develop a CBRP to achieve compliance with the WLAs by the compliance dates. Periodic evaluation and update of the CBRP may be necessary based on a BMP effectiveness analysis to ensure compliance with the WLAs by the compliance dates.

15. Within the Permit Area, there are two watershed-wide MSAR TMDL monitoring stations (WW-S1 Santa Ana River Reach 3 at MWD Crossing and WW-S4 Santa Ana River Reach 3 at Pedley Avenue). The MSAR Permittees are required to comply with the numeric Bacterial Indicator targets at these monitoring locations by December 31, 2015 for the Dry Weather conditions (April 1 through October 31, as defined in the TMDL) and by December 31, 2025 for the Wet Weather conditions (November 1 through March 31, as defined by the TMDL).

16. In the absence of an approved CBRP, the WLAs become the final numeric WQBEL that must be achieved by the compliance dates.

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[15] Pre-compliance evaluation monitoring is monitoring conducted prior to the TMDL compliance date to assess the effectiveness of BMPs implemented in reducing pollutant(s) of concern by the compliance date.

17. On December 20, 2004, the Regional Board adopted Resolution R8-2004-0037 amending the Basin Plan to incorporate the Lake Elsinore and Canyon Lake Nutrient TMDLs. These TMDLs were subsequently approved by the State Board on May 19, 2005, by the Office of Administrative Law on July 26, 2005 and by the USEPA on September 30, 2005. These TMDLs include urban WLAs that are now incorporated into Chapter 5 of the Basin Plan. For both Canyon Lake and Lake Elsinore, the TMDLs specify causal numeric targets (nitrogen and phosphorus) and response numeric targets (chlorophyll *a*, dissolved oxygen and un-ionized ammonia). The TMDLs also specify nitrogen and phosphorus WLAs (point source discharges) and LAs (nonpoint source discharges) for each lake. Compliance with interim dissolved oxygen and chlorophyll a numeric targets is to be achieved by December 31, 2015. Compliance with the final numeric targets and WLAs and LAs is to be achieved by December 31, 2020. The LAs and WLAs are specified as 10-year running average.

18. The nitrogen and phosphorus WLAs and LAs for Canyon Lake are applicable to those discharges tributary to Canyon Lake. The nitrogen and phosphorus WLAs and LAs for Lake Elsinore apply to those areas downstream of Canyon Lake and to overflows from Canyon Lake.

19. TMDL Implementation Plans for each TMDL assign responsibilities to specific MS4 dischargers/stakeholders to identify sources of Impairment, to propose BMPs to address those sources, and to monitor, evaluate and revise BMPs based on monitoring results. Specific TMDL Implementation Plan tasks associated with Urban Runoff are described in Chapter 5 of the Basin Plan and are assigned to one or more of the Permittees. Requirements of the TMDL implementation plan tasks are incorporated into this Order and were proposed for inclusion in Chapter 13 of the DAMP (see 2007 ROWD). Several of these tasks are also jointly assigned to non-Permittee stakeholders. The Permittees have established TMDL Task Forces to jointly implement and coordinate those tasks.

20. To evaluate compliance with TMDL WLAs as per the Implementation Plans, the Permittees proposed to submit a Comprehensive Nutrient Reduction Plan to:

    a. Evaluate the effectiveness of BMPs and other control actions implemented; and

    b. Evaluate the progress towards compliance with the nutrient WLA for Urban Runoff.

21. The Canyon Lake and Lake Elsinore Nutrient TMDL Task Force (also referred to as the San Jacinto Watershed Urban Dischargers) members are tabulated below:

Table 6 - Canyon Lake and Lake Elsinore Nutrient TMDL Task Force

Riverside MS4 Permittees	Non-Permittees
Beaumont, City of	California Department of Fish and Game
Canyon Lake, City of	California Department of Transportation (Caltrans),
Hemet, City of	Eastern Municipal Water District
Lake Elsinore, City of	Elsinore Valley Municipal Water District
Moreno Valley, City of	U.S. Air Force (March Air Reserve Base), March Joint Powers Authority,
Murrieta, City of	U.S. Forest Service
Perris, City of	Western Riverside County Agricultural Coalition
San Jacinto, City of	
Riverside, City of	
Riverside, County of	
RCFC&WCD	

22. The cities of Menifee and Wildomar were recently incorporated and are responsible for compliance with the Canyon Lake and Lake Elsinore Nutrient TMDL requirements. They have the option to participate in the TMDL Task Force or comply with the TMDL requirements on their own.

23. Interim compliance (compliance determination prior to the final WLA compliance dates) determination with the WLAs in the TMDLs will be based on the Lake Elsinore and Canyon Lake (LE/CL) Permittees progress towards implementing the various TMDL Implementation Plan tasks as per the resultant studies and plans approved by the Regional Board. The CL/LE Permittees are required to develop a Comprehensive Nutrient Reduction Plan (CNRP) designed to achieve compliance with the WLAs by the final compliance date for approval of the Regional Board. In the absence of an approved CNRP, the WLAs specified in the approved Canyon Lake/Lake Elsinore Nutrient TMDL will constitute the final numeric WQBELs.

G. NEW DEVELOPMENT/SIGNIFICANT REDEVELOPMENT – WQMP /LID

1. The California Constitution and Government Code provide the Co-Permittees planning policy powers that mandate that the Co-Permittees review and condition New Development consistent with the Subdivision Map Act, CEQA, and their respective general plans, ordinances, and resolutions to ensure the general public's health and safety. If these constitutional and statutory mandates are not properly implemented and local ordinances and resolutions are not properly enforced, there is a creditable potential that New Development could result in the discharge of Pollutants via Urban Runoff to the Waters of the U.S within the Permit Area.

2. Significant development has taken place in Riverside County in the last decade. These developments have resulted in the urbanization of many areas. Urbanization generally increases Urban Runoff volume and velocity of runoff and the amount of Pollutants in the runoff. As development occurs, natural vegetated

pervious ground cover is converted to impervious surfaces such as highways, streets, rooftops and parking lots. Natural vegetated soil can both absorb rainwater and remove Pollutants providing an effective natural purification process. In contrast, impervious surfaces can neither absorb water nor remove Pollutants, and the natural purification characteristics are lost. Additionally, urban development can significantly increase Pollutant loads as the increased population density causes proportionately higher levels of vehicle emissions, vehicle maintenance wastes, municipal sewage wastes, pesticide, household hazardous wastes, pet wastes, trash, and other Anthropogenic Pollutants.

3. Urbanization can especially threaten environmentally sensitive areas (ESAs) and stream geomorphology. ESAs typically have a much lower capacity to withstand Pollutant loads. In essence, development that is ordinarily insignificant in its impact on the environment may in a particular sensitive environment become significant. Designated ESAs are defined in the Glossary (Appendix 4).

4. Unmitigated high volumes and velocities of discharges from MS4 facilities associated with new development (which may include non-Urban Runoff) into natural watercourses can alter the natural rate of change of a stream and adversely impact aquatic ecosystems and stream habitat and cause stream bank erosion and physical modifications. These changes are the result of Hydromodification. Typically, Hydromodification especially impacts those natural streams in the developing foothills and in other urbanizing fringe portions of the Permit Area.

5. On October 5, 2000, the State Board adopted Order No. WQ-2000-11, which is a precedential order. Order No. WQ-2000-11 required that Urban Runoff generated by 85th percentile storm events from specific types of development categories be infiltrated, filtered or treated. The essential elements of this precedential order were incorporated into the 2002 MS4 Permit and are incorporated herein. In accordance with the requirements specified in the 2002 MS4 Permit, the Permittees developed a model WQMP and Template.

6. The WQMP and Template provide a framework to incorporate some of the watershed protection principles into the Co-Permittees' planning, construction and post-construction phases of New Development and Significant Redevelopment projects. The WQMP includes site design (including, where feasible, LID principles), Source Control and Treatment Control elements to reduce the discharge of Pollutants in Urban Runoff. On September 17, 2004, the Regional Board approved the WQMP. The Co-Permittees are requiring proponents of New Developments and Significant Redevelopments to develop and implement site-specific WQMPs. This Order requires Co-Permittees to continue requiring preliminary project-specific WQMPs as early as possible during the environmental review or planning phase (land use entitlement) and to review and approve final project-specific WQMP that is in substantial conformance with the preliminary

project-specific WQMP prior to the issuance of any building or grading permit. This Order also requires Co-Permittees to verify functionality of post-construction BMPs prior to issuance of certificate of occupancy and to track and ensure long term operation and maintenance of those BMPs as per the approved project-specific WQMPs.

7. An audit of each of the Pemittees' Urban Runoff management programs during the term of the 2002 MS4 Permit indicated no clear nexus between the watershed protection principles, including LID techniques specified in the WQMP and the Permittees' General Plan or related documents such as Development Standards, Zoning Codes, Conditions of Approval and Project Development Guidance. Existing procedures, ordinances, local codes, and development standards may be barriers to implementation of LID practices. This Order requires the Permittees to evaluate their General Plans, comprehensive or master plans, zoning codes, subdivision ordinances, project development standards, conditions of approval or related documents to determine whether the removal of any barriers, within their control, is feasible for implementation of LID techniques and other requirements of this Order. Where feasible, the Co-Permittees will make appropriate changes to remove barriers to implement LID techniques and other requirements of this Order.

8. This Order also requires the Permittees to review and enforce covenants, conditions and restrictions (CC&R) or develop other mechanisms to ensure proper long term operation and maintenance of post-construction BMPs.

9. In addition to addressing post-development water quality, the WQMP includes requirements to protect ESAs and address potential Hydromodification issues. Section 4.4 of the WQMP requires identification of Hydrologic Conditions of Concern (HCOC). An HCOC exists when a site's hydrologic regime is altered and there are significant impacts on downstream channels and aquatic habitats, alone or in conjunction with impacts of other projects. Currently, New Development and Significant Re-development projects are required to perform this assessment and incorporate appropriate BMPs to ensure existing hydrologic conditions are maintained. This Order requires the Permittees to implement LID techniques to minimize HCOC.

10. Management of the impacts of urbanization on water quality and stream stability in the Permit Area is more effective if the techniques are implemented at the project site, within the neighborhood and within each Co-Permittee's jurisdiction based on an overall watershed plan. The Permittees have identified Major Outfalls and have submitted maps of existing MS4 facilities. This Order requires the Permittees to expand upon the existing maps to include a map of its lined and unlined channels and streams within the Permit Area with the goal of identifying, prioritizing, and developing specific action plans for protecting those segments of streams that are vulnerable to development impacts.

11. This Order further requires the Permittees to develop a Watershed Action Plan that would address TMDL Implementation Plan BMP strategies and provide regional tools to address Hydromodification. The Permittees may choose to implement a single Watershed Action Plan for the entire Permit Area, or subdivide the Permit Area into sub-watersheds as appropriate to cost-effectively address TMDL requirements. The Watershed Action Plan integrates existing watershed based planning efforts and incorporates watershed tools to manage cumulative impacts of development on vulnerable streams, preserve structure and function of streams, and protect source, surface and groundwater quality and water supply in the permitted area. The Watershed Action Plan should integrate Hydromodification and water quality management strategies with land use planning policies, ordinances, and plans within each jurisdiction. Existing Permittee watershed planning efforts include the Western Riverside County Multiple Species Habitat Conservation Plan, Special Area Management Plan, Santa Ana and San Jacinto Integrated Regional Watershed Management Plans, Lake Elsinore and Canyon Lake and Middle Santa Ana River TMDL Task Forces, SCCWRP Hydromodification sensitivity mapping project, and various regional BMP evaluations being conducted by the Principal Permittee in conjunction with various water districts should be evaluated and incorporated into the Watershed Action Plan as necessary to address TMDL Implementation Plan requirements and Hydromodification. The regional efforts should be evaluated, and if necessary, enhanced to provide Permittees with the tools to integrate Hydromodification and TMDL management strategies with Permittee MS4 Permit compliance programs and land use planning policies, ordinances, and plans within appropriate Permittee jurisdictions within the Permit Area.

12. Pending completion of a Watershed Action Plan and implementing tools, management of the impacts of urbanization shall be accomplished on a per project and per jurisdiction basis through jurisdictional implementation of the watershed tools incorporated into the local general plans, ordinances and other requirements and the project-specific WQMPs.

13. The SMC in collaboration with SCCWRP and the California Storm Water Quality Association (CASQA) with funding from the State Water Resources Control Board and CASQA is developing a LID manual for Southern California. This manual will be incorporated into the CASQA BMP Handbooks. The Permittees are encouraged to utilize the LID manual as a resource to implement LID techniques once completed.

14. This Order requires the project proponents to first consider preventative and conservation techniques (e.g., preserve and protect natural features to the MEP) prior to considering mitigative techniques (Structural BMPs such as infiltration systems, or other Treatment Control BMPs). The mitigative measures should be

prioritized with the highest priority for BMPs that remove Pollutants in Urban Runoff and reduce the volume of Urban Runoff, such as infiltration, then other BMPs, such as harvesting and use, evapotranspiration and bio-treatment should be considered. Consistent with the MEP standard, these LID BMPs must be implemented at the project site. Consideration of "highest and best use" of the discharge should also be considered. For example, Lake Elsinore is evaporating faster than runoff from natural precipitation can recharge it. Requiring infiltration of 85% of runoff events for projects tributary to Lake Elsinore would only exacerbate current water quality problems associated with Pollutant concentration due to lake water evaporation. In cases where rainfall events have low potential to recharge Lake Elsinore (i.e. no hydraulic connection between groundwater to Lake Elsinore, or other factors), requiring infiltration of Urban Runoff from projects is counterproductive to the overall watershed goals. Project proponents, in these cases, would be allowed to discharge Urban Runoff, provided they used equally effective filtration-based BMPs. The Regional Board also recognizes that site conditions, including site soils, contaminant plumes, high groundwater levels, etc., could limit the applicability of infiltration and other LID BMPs at certain project sites. Where LID BMPs are not feasible or appropriate at the project site, more traditional, but equally effective BMPs (proprietary or non-proprietary) should be implemented. This Order provides for alternatives and in-lieu programs where preferred LID BMPs are infeasible or inappropriate. In addition, extra diligence should also be performed when proposing infiltration BMPs in areas where the proposed land use is often associated with soil and groundwater contamination. Pre-treatment of the water prior to infiltration is necessary in most cases. Proprietary treatment devices may be utilized when it is demonstrated that they meet or exceed the MEP standard.

15. The USEPA has determined that LID/green infrastructure can be a cost-effective and environmentally preferable approach for the control of storm water pollution and to minimize downstream impacts by mimicking pre-development hydrology. LID techniques promote the reduction of impervious areas which may achieve multiple environmental and economic benefits in addition to enhanced water quality and supply, stream and habitat protection, cleaner air, reduced urban temperature, increased energy efficiency and other community benefits such as aesthetics recreation, and wildlife areas. This Order incorporates a volume capture metric based on the design volume specified in the WQMP.

16. If not properly designed and maintained, Treatment Control BMPs could create a nuisance and/or habitat for vectors[16] (e.g., mosquitoes and rodents). The 2002 MS4 Permit required the Permittees to closely collaborate with the local vector

[16] Managing Mosquitoes in Storm water Treatment Devices, Marco E. Metzger, University of California Davis, Division of Agriculture and Natural Resources, Publication 8125.

control agencies during the development and implementation of such Treatment Control BMPs. The Permittees should continue these collaborative efforts with the vector control agencies to ensure that Treatment Control BMPs do not become a Nuisance or a potential source of Pollutants. The requirements specified in this Order include identification of responsible agencies for maintaining the Treatment Control BMPs and for providing funding for operation and maintenance.

17. If not properly designed and maintained, groundwater infiltration systems may adversely impact groundwater quality. Restrictions placed on Urban Runoff infiltration in this Order (Section XI.D.8) are based on recommendations provided by the USEPA Risk Reduction Laboratory. The Permittees should work closely with the water districts and water conservation districts to insure groundwater protection.

18. This Order incorporates new project categories and revised thresholds for several categories of new development and redevelopment projects that trigger the requirement for a WQMP. The 2008 National Research Council (NRC) report[17] indicates that roads and parking lots constitute as much as 70% of total impervious cover in ultra-urban landscape, and as much as 80% of the directly connected impervious cover. Roads tend to capture and export more storm water Pollutants than other impervious covers. As such, roads are included as a priority development category for which WQMPs are required. Private New Development and Significant Redevelopment projects incorporating roads typically allow road runoff to be addressed as part of the overall water quality strategy for the larger common plans of development. Permittee streets, roads and highways capital projects have special limitations. For example, the footprint of street, road and highway capital projects is often limited and may have hydraulic constraints due to lack of underground storm drain systems that would otherwise be necessary to hydraulically facilitate treatment of runoff. There are also limitations specified in state and federal design and code specifications that may limit or prohibit certain BMPs. Permittees may also be subject to flow diversion liability and limited road maintenance budgets and equipment. Street, road and highway projects that function as part of the MS4 also receive runoff and associated Pollutants from both existing urban areas and other external sources, including adjacent land use activities, aerial deposition, brake pad and tire wear and other sources that may be outside the Co-Permittee's authority to regulate and/or economic or technological ability to control. These offsite flows can overwhelm Treatment Control BMPs designed to address the footprint (consistent with the typical requirements for a WQMP) of street, road or highway capital projects incorporating curb and gutter as part of its storm water conveyance function. Despite these limitations, the Regional Board finds that Permittee construction of streets, roads and highway capital

[17] National Research Council Report (2008), http://www.nap.edu/catalog.php?record_id=12465

projects may provide an opportunity to address Pollutant loads from existing urban areas. However, due to the nature of the facilities and projects, it would be unduly burdensome for the Co-Permittees to maintain WQMP documents for transportation projects (in addition to Facility Pollution Prevention Plans and other overlapping requirements of this Order). The Permittees are therefore not required to prepare WQMP documents for street, road and highway capital projects, but instead are required to develop functionally equivalent documents that include site specific consideration utilizing BMP guidance to address street, roads and highway capital project runoff to the MEP.

19. The NRC report also indicates that there is a direct relationship between impervious cover and the biological condition of downstream receiving waters. The Permittees are required to address HCOC from New Development and Significant Redevelopment projects to minimize downstream impacts.

H. CO-PERMITTEE INSPECTION PROGRAMS

1. Each Co-Permittee conducts inspections of those Construction Sites for which it has issued either a grading or building permit to determine compliance with its ordinances, regulations, and codes, including its Storm Water Ordinance. Each Co-Permittee, consistent with its ordinances, rules and regulations, inspects each site for compliance with the conditions of approval governing the grading or building permit. These inspections have been expanded by the Co-Permittees to determine that sites requiring coverage under the General Construction Activity Storm Water Permit have obtained permit coverage by verifying that a Waste Discharge Identification (WDID) number has been issued by the State Board..

2. The DAMP addresses compliance strategies with regard to industrial and commercial facilities. As part of their Urban Runoff management activities, the Principal Permittee and the County entered into an agreement, dated August 10, 1999 by which they have developed and funded, in cooperation with the Riverside County Environmental Health Department, the "Compliance Assistance Program" (CAP) which includes a storm water survey component as part of existing inspections of hazardous material handlers and retail food service activities. The CAP consists of educational outreach to the inspected facilities and detailed storm water compliance surveys for each facility that must secure a hazardous materials permit for either storing, handling or generating such materials (there are approximately 5,500 facilities of which approximately 2,300 are inspected annually, and all facilities are inspected at least once during a two year cycle) and retail food facilities (there are approximately 6,750 facilities, all of which are inspected 1 to 3 times annually). Storm Water Compliance Surveys are conducted with each inspection of hazardous materials facilities, and at least once during the MS4 Permit term for restaurants. Restaurant inspectors are authorized to conduct

additional surveys if they observe an IC/ID or ordinance violation. The type of industrial/commercial establishment that is inspected includes, but is not limited to, automobile mechanical repair, maintenance, fueling, or cleaning operation, automobile or other vehicle body repair or painting operations, and painting or coating operations. Completed surveys that indicate non-compliance are forwarded to the appropriate Co-Permittee's enforcement division for follow up action. In addition, the cities of Corona and Riverside, which operate publicly owned treatment works (POTW), conduct annually on average, approximately 4,400 wastewater pre-treatment inspections, on a variety of industrial and commercial establishments within their respective jurisdictions, including, but not limited to, retail food establishments, car washes, and carpet, drape & furniture cleaning establishments. The Permittees have agreed to notify Regional Board staff when conditions are observed during such inspections that appear to be in violation of either the Storm Water General Permits or a permit issued by the Regional Board.

3. An evaluation of the Permittees' inspection programs during the 2002 MS4 Permit indicated a wide range of compliance and non-compliance with the Construction Cite and Industrial and Commercial Facilities inspection requirements. In many instances, the Construction Site and Facilities' return to compliance was not properly documented. This Order includes requirements for a more effective inspection program and includes a performance measure, time to return to compliance, as a metric for program effectiveness.

I. ILLICIT CONNECTIONS/ ILLEGAL DISCHARGES (IC/ID)

1. Illegal Discharges to the MS4 can contribute to contamination of Urban Runoff and other surface waters. During the term of the 1990 MS4 Permit, the underground MS4 facilities were inspected and only one Illicit Connection was identified. Open channels and other aboveground elements of the MS4 are inspected for evidence of Illegal Discharges as an element of routine maintenance by the Permittees. The Permittees also developed a program to prohibit IC/IDs to their MS4 facilities. Continued surveillance and enforcement of these programs are required to eliminate IC/IDs. The Permittees have a number of procedures in place to eliminate IC/IDs to the MS4, including Construction Site and Commercial, and Industrial Facility inspections, MS4 facility inspections, water quality monitoring and reporting programs, and public education.

2. The Permittees have the authority to control Pollutants in Urban Runoff, to prohibit IC/ID, to control spills, and to require compliance and carry out inspections of the MS4 facilities within their respective jurisdictions. The Co-Permittees have been extended necessary legal authority through California

statutes and local charters. Consistent with this statutory authority, each of the Co-Permittees have adopted their respective Storm Water Ordinances.

3. Even though the Permittees have established the authority and the procedures to detect and eliminate IC/IDs, audits conducted during the term of the 2002 MS4 Permit indicated that this program element is generally carried out passively through complaint response. IC/IDs are also detected through inspection programs and maintenance activities. Reports from maintenance inspectors are also typically logged as complaints. This Order requires each Permittee to revise this program element based on the Center for Watershed Protection's Illegal Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments, or equivalent program.

J. TECHNOLOGY-BASED EFFLUENT LIMITATIONS (Not Applicable)

K. WATER QUALITY-BASED EFFLUENT LIMITATIONS (WQBELs) AND TMDL WLA

1. 40 CFR 122.44(d) requires that NPDES permits include WQBELs to attain and maintain applicable numeric and narrative water quality criteria to protect the Beneficial Uses of the Receiving Water. Where numeric water quality criteria have not been established, 40 CFR 122.44(d) specifies that WQBELs may be established using USEPA criteria guidance under CWA section 304(a), proposed State criteria or a State policy interpreting narrative criteria supplemented with other relevant information, or an indicator parameter. In *Defenders of Wildlife, et al* v. *Browner,* No. 98–71080 (9th Cir, October 1999), the Court held that the CWA does not require strict compliance with State Water Quality Standards for MS4 permits under section 301(b)(1)(C), but that at the same time, the CWA does give the permitting authority the discretion to incorporate appropriate WQBEL under another provision, CWA Section 402(p)(3)(B)(iii). The use of BMPs to control or abate the discharge of Pollutants is allowed by 40 CFR 122.44(k)(3) when Numeric Effluent Limitations are infeasible or when practices are reasonably necessary to achieve Effluent Limitations and standards or to carry out the purposes and intent of the CWA. The legislative history and the preamble to the federal storm water regulations indicate that the Congress and the USEPA were aware of the difficulties in regulating Urban Runoff solely through traditional end-of-pipe treatment. It is the Regional Board's intent to require the Permittees to implement BMPs consistent with the MEP standard in order to support attainment of Water Quality Standards. This Order includes Receiving Water Limitations based on Water Quality Objectives; it prohibits the creation of Nuisance and requires the reduction of Water Quality Standards Impairment in Receiving Waters. The Permit includes a procedure for determining whether Urban Runoff is causing or contributing to exceedances of Receiving Water Limitations and for evaluating whether the DAMP must be revised to include additional or more effective BMPs designed to meet

Water Quality Standards. The Order establishes an iterative process to determine compliance with the Receiving Water Limitations.

2. To support attainment of Water Quality Standards, consistent with the MEP standards, this Order aims to reduce the discharge of Pollutants in Urban Runoff from the MS4 by requiring Permittees to:
   a. Implement BMPs at Permittee facilities and activities,
   b. Require BMPs, including where appropriate, LID techniques, to be implemented at New Development and Significant Redevelopment project sites prior to accepting discharges into their MS4 facilities, where feasible,
   c. Implement and annually evaluate the DAMP and each Permittee's LIP for effectiveness in reducing Pollutants in Urban Runoff, and
   d. Determine if Urban Runoff is contributing to exceedances of Water Quality Objectives or Beneficial Uses in Receiving Waters by comparing outfall and receiving water monitoring results to: (1) Water Quality Objectives (WQOs), (2) California Toxic Rule (CTR), (3) USEPA Multi-Sector Permit Parameter Benchmark Values and (4) other appropriate data identified by the Permittees. The Permittees should also evaluate the Regional Monitoring reports prepared by SCCWRP to assess trends in Urban Runoff and Receiving Water quality within the Permit Area.
3. Federal regulations (40 CFR 122.44(d)(1)(vii)(B) require inclusion of Effluent Limits that are "consistent with the assumptions and requirements of any available WLA for the discharge prepared by the State and approved by USEPA." Consistent with this requirement, this Order includes interim effluent limits and a process for developing a BMP-based approach which, if adopted by the Regional Board prior to the compliance dates(s) specified in the associated comprehensive plan, shall become the final WQBEL(s). The Permittees are required to submit a comprehensive plan describing the proposed BMPs and the documentation demonstrating that the BMPs are expected to attain the WLAs by the compliance dates when implemented. If the Regional Board approves this comprehensive plan, this Order will be amended to include the comprehensive plan as the final WQBEL(s). If the Regional Board does not approve the comprehensive plan prior to the compliance date; the WLAs will become the final WQBEL(s) on the applicable compliance date and will remain in effect until a comprehensive plan is approved by the Regional Board. The comprehensive plan will be updated, as necessary, to reflect evaluations of the effectiveness of the BMPs, including evaluations presented in the annual reports.

4. These WQBELs are consistent with the assumptions and requirements identified in the TMDL Implementation Plans adopted with the TMDLs because the WQBELs are expected to be sufficient to meet the WLAs by the compliance dates. The

TMDLs within the Permit Area are described in Section F, above. These include the following:

a. MSAR Bacterial Indicator TMDL

i. The TMDL relies on this Order to implement the WLAs for Urban Runoff from the MSAR Permittees.

ii. This Order requires the MSAR Permittees to fully comply with the TMDL Implementation Plan. The TMDL Implementation Plan includes requirements for monitoring, and submittal of plans and schedules to implement short term solutions and develop long-term solutions to achieve TMDL compliance by the specified compliance dates.

iii. There are two components in the MSAR TMDL (fecal coliform and *E. coli*). The Basin Plan currently does not have an established objective for *E. coli*. The work that is currently being done by SWQSTF is expected to make recommendations for the adoption of *E. coli* objectives and revised WLAs based on *E.coli*. This Order incorporates the current WLAs as WQBELs. If the WLAs are revised, this Order will be reopened to incorporate the new WLAs.

iv. Upon adoption of this Order, the tasks identified in the MSAR TMDL Implementation Plan that have been developed by the MSAR Permittees and approved by the Regional Board become the interim Effluent Limits.

v. The MSAR Permittees are required to develop a Comprehensive Bacteria Reduction Plan(CBRP) designed to achieve WLAs by the compliance date. Once approved by the Regional Board, the CBRP becomes the final Effluent Limit. In the absence of an approved CBRP, the WLAs become the final numeric WQBEL by the compliance date specified in the TMDL.

b. Canyon Lake and Lake Elsinore Nutrient TMDLs

i. This Order is consistent with the Urban WLAs specified in the Canyon Lake and Lake Elsinore Nutrient TMDLs.

ii. Consistent with the TMDL Implementation Plan, this Order requires the LE/CL Permittees to identify sources of Impairment, propose BMPs to address those sources, and to monitor, evaluate and revise BMPs based on the monitoring results. Specific TMDL Implementation Plan tasks are described in Chapter 5 of the Basin Plan and are assigned to one or more of

the Permittees. Requirements of the TMDL Implementation Plan tasks are incorporated into this Order and Chapter 13 of the 2007 DAMP.

iii. In Chapter 13 of the 2007 DAMP submitted with the ROWD, the LE/CL Permittees have proposed BMP programs, consistent with the aforementioned TMDL Implementation Plan tasks.

iv. This Order also requires the LE/CL Permittees to monitor at representative Urban Runoff monitoring locations defined in the Consolidated Program for Water Quality Monitoring (CMP), (Phase 2 TMDL Monitoring is specified in the Lake Elsinore and Canyon Lake Nutrient TMDL Monitoring Plan dated February 15, 2006) and TMDL Implementation Plan and to evaluate the effectiveness of BMPs implemented in the Permit Area in reducing Pollutants of Concern in Urban Runoff to determine progress towards attainment of WLAs by the specified compliance date.

v. The Regional Board recognizes that additional research is needed to determine the most appropriate control mechanism to attain Water Quality Standards for nutrients in these two lakes. This Order provides the LE/CL Permittees the flexibility to meet the WLAs through a variety of techniques. Even though, the WLAs for the Canyon Lake and Lake Elsinore Nutrient TMDLs are expressed as WQBELs, if Water Quality Standards in the Lakes are met through biological or other in-Lake control mechanisms, the LE/CL Permittees' obligation to meet the WLAs is satisfied. as the impairment for which the TMDLs were developed would not exist anymore. The Permittees in the affected watersheds are required to develop a CNRP designed to achieve the WLAs by the compliance dates specified in the TMDL. In the absence of an approved CNRP, the WLAs become the final numeric WQBELs for nutrients.

L. WATER QUALITY CONTROL PLAN (BASIN PLAN)

1. The Regional Board adopted a revised Water Quality Control Plan for the Santa Ana River Basin (hereinafter Basin Plan) that became effective on January 24, 1995. The Basin Plan designates Beneficial Uses, establishes Water Quality Objectives, and contains implementation programs and policies to achieve those Water Quality Objectives for all waters in the Santa Ana Region addressed through the Basin Plan.

2. More recently, the Basin Plan was significantly amended to incorporate revised boundaries for groundwater subbasins, now termed "management zones", new nitrate-nitrogen and TDS objectives for the new management zones, and new nitrogen and TDS management strategies applicable to both surface and ground

waters. This Basin Plan Amendment was adopted by the Regional Board on January 22, 2004. The State Board and the Office of Administrative Law (OAL) approved the amendment on September 30, 2004 and December 23, 2004, respectively. The USEPA approved the surface water standard and related provisions of the amendment on June 20, 2007.

3. TDS and TIN limitations in Table 4-1 of the Basin Plan are specified in this Order for Permittees' discharges subject to the De Minimus Permit. Where Dry Season flows are identified as part of the IC/ID program element, this Order also requires Permittees to establish their baseline discharge concentration for Dry Season conditions.

4. As discussed in Section K, WQBELs, and TMDL WLA, the Basin Plan has been amended to incorporate several TMDLs and TMDL Implementation Plans adopted for waterbodies within the Permit Area. In addition, the Basin Plan implements State Board Resolution 88-63, which established a state policy that all waters, with certain exceptions, are suitable or potentially suitable for municipal or domestic water supply. Thus, as discussed in detail in the Fact Sheet, Beneficial Uses recognized in the Basin Plan for Receiving Waters in the Permit Area are as follows:

   a. Municipal and Domestic Supply,
   b. Agricultural Supply,
   c. Industrial Service Supply,
   d. Industrial Process Supply,
   e. Groundwater Recharge,
   f. Hydropower Generation,
   g. Water Contact Recreation,
   h. Non-contact Water Recreation,
   i. Warm Freshwater Habitat,
   j. Limited Warm Freshwater Habitat,
   k. Cold Freshwater Habitat,
   l. Preservation of Biological Habitats of Special Significance,
   m. Wildlife Habitat,
   n. Rare, Threatened or Endangered Species, and
   o. Spawning, Reproduction, and Development

5. The existing and potential Beneficial Uses of groundwater that could be impaired by the discharge of Urban Runoff within the Permit Area include one or more of the following:

   a. Municipal and Domestic Supply,
   b. Agricultural Supply,
   c. Industrial Service Supply, and

d. Industrial Process Supply

6. The Basin Plan also incorporates by reference all State Board water quality control plans and policies including the 1990 Water Quality Control Plan for Ocean Waters of California (Ocean Plan) and the 1974 Water Quality Control Policy for Enclosed Bays and Estuaries of California (Enclosed Bays and Estuaries Policy). Water Quality Objectives specified in the Basin Plan are local numeric and narrative objectives that may be more stringent than the national or statewide water quality criteria.

M. NATIONAL TOXICS RULE (NTR) AND CALIFORNIA TOXICS RULE (CTR)

NTR and CTR are blanket water quality criteria that apply to all surface water discharges. However, the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* states that the Policy does not apply to regulation of storm water discharges. Regional Board believes that compliance with Water Quality Standards through implementation of BMPs is appropriate for regulating Urban Runoff. The USEPA articulated this position on the use of BMPs in storm water permits in the policy memorandum entitled, "Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits" (61 FR 43761, August 9, 1996).[18]

N. STATE IMPLEMENTATION POLICY (SIP)

See Section M, above.

O. COMPLIANCE SCHEDULES AND INTERIM REQUIREMENTS

The Basin Plan contains schedules for achieving compliance with WLAs for Bacterial Indicators in the MSAR watershed and nutrients in the San Jacinto watershed (Canyon Lake/Lake Elsinore). It is appropriate to require the CL/LE Permittees to comply with those time schedules for various deliverables as specified in the approved TMDL Implementation Plans. Consistent with the State Board's Compliance Schedule Policy (Resolution No. 2008-0025), this Order incorporates interim and final Effluent Limits, where applicable. Additionally, since the TMDL compliance dates are outside the term of this MS4 Permit, it is also appropriate to require the Permittees to monitor and report the effectiveness of BMPs implemented in the Permit Area to evaluate progress towards attainment of WLAs by the time schedules specified in the adopted TMDLs. This Order includes the schedules for deliverables as part of the TMDL Implementation Plans as well as a requirement to monitor the effectiveness of BMPs in the Permit

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[18] See discussions on Wet Weather Flows in the Federal Register/Vol. 65, No. 97/Thursday, May 18, 2000/Rules and Regulations

Area in reducing Pollutant discharges and to report progress towards compliance with the TMDL WLAs by the compliance dates.

P. ANTIDEGRADATION POLICY

40 CFR 131.12 requires that State Water Quality Standards include an antidegradation policy consistent with the federal policy. The State Board established California's antidegradation policy in Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. As discussed in detail in the Fact Sheet (see sections IV and V), the permitted discharges are consistent with the antidegradation provisions of 40 CFR 131.12 and State Board Resolution No. 68-16.

Q. ANTI-BACKSLIDING

Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require Effluent Limitations in a reissued NPDES permit to be as stringent as those in the previous permit, with some exceptions where Effluent Limitations may be relaxed. All Effluent Limitations in this Order are at least as stringent as the Effluent Limitations in the 2002 Order.

R. PUBLIC EDUCATION/PARTICIPATION

1. Public participation during the development of Urban Runoff management programs and implementation plans is necessary to ensure that all stakeholder interests and a variety of creative solutions are considered. In addition, the federal storm water regulations require public participation in the development and implementation of the Urban Runoff management program. As such, the Permittees are required to solicit and consider all comments received from the public and submit copies of the comments to the Executive Officer of the Regional Board with the Annual Reports. In response to public comments, the Permittees may modify reports, plans, or schedules prior to submittal to the Executive Officer.

2. There are Pollutants in Urban Runoff from privately owned and operated facilities such as residences, businesses and commercial establishments and public and private institutions. A successful NPDES MS4 permit program should include the participation and cooperation of public entities, private businesses, and public and private institutions. Therefore, public education is a critical element of the DAMP. As the population increases in the Permit Area, it will be even more important to

continue to educate the public regarding the impact of human activities on the quality of Urban Runoff.

3. In addition to the Regional Board, a number of other stakeholders are involved in the management of the water resources of the Region. These include, but are not limited to, the incorporated cities in the Region, POTWs, the three counties, and the Santa Ana Watershed Project Authority and its member agencies. The entities listed in Appendix 2 are considered as potential dischargers of Urban Runoff in the Permit Area. It is expected that these entities will also work cooperatively with the Permittees to manage Urban Runoff. The Regional Board, pursuant to 40 CFR 122.26(a), has the discretion and authority to require non-cooperating entities to participate in this Order or to issue individual MS4 permits. The Permittees may request the Regional Board to issue a separate NPDES Permit to any discharger into MS4 facilities they own or operate.

4. Cooperation and coordination among the stakeholders (regulators, Permittees, the public, and other entities) are critical to optimize the use of finite public resources and ensure economical management of water quality in the Region. Recognizing this fact, this Order focuses on integrated watershed management and seeks to integrate the programs of the stakeholders, especially the holders of the three MS4 permits within the Regional Board's jurisdiction.

5. Education is an important aspect of every effective Urban Runoff management program and the basis for changes in behavior at a societal level. Education of municipal planning, inspection, and maintenance department staff is especially critical to ensure that in-house staff understand how their activities impact water quality, how to accomplish their jobs while protecting water quality, and their specific roles and responsibilities for compliance with this Order. Public education, designed to target various urban land users and other audiences, is also essential to inform the public of how individual actions affect Receiving Water quality and how adverse effects can be minimized.

6. Some Urban Runoff issues, such as public education and training, can be effectively addressed on a regional or statewide basis. Regional approaches to Urban Runoff management can improve program consistency and promote sharing of resources, which can result in implementation of more efficient programs. In particular the counties of San Bernardino and Riverside and their collective municipalities are encouraged to cooperatively work together and generate a unified education and training program.

S. PERMITTEE FACILITIES AND ACTIVITIES

1. The Permittees own/operate facilities where industrial or related activities take place that may have an impact on Urban Runoff quality. Some of the Permittees

enter into contracts with outside parties to carry out activities that may also have an impact on Urban Runoff quality. These facilities and related activities include, but are not limited to, street sweeping, catch basin cleaning, maintenance yards, vehicle and equipment maintenance areas, waste transfer stations, corporation and storage yards, parks and recreational facilities, landscape and swimming pool maintenance activities, MS4 maintenance activities and the application of herbicides, algaecides and pesticides.

2. This Order requires continued implementation of BMPs intended to reduce Pollutant discharges from those Permittee activities/facilities that are found to be significant sources of Pollutants in Urban Runoff. This Order prohibits non-storm water discharges from facilities owned or operated by the Permittees unless the discharges are exempt under Section VI of this Order or are permitted by the Regional Board under an individual NPDES permit.

3. Program evaluations conducted during the term of the 2002 MS4 Permit indicated varying degrees of compliance/noncompliance at Permittee facilities and activities. This Order requires each Permittee to review its inventory of fixed facilities, field operations and drainage facilities to ensure that Permittee facilities do not cause or contribute to a Pollution or Nuisance in Receiving Waters. Permittee fixed public facilities and field operations are to be inspected annually.

T. MUNICIPAL CONSTRUCTION PROJECTS

1. The 2002 MS4 Permit authorized the discharge of storm water from construction activities on an acre or more, that are under ownership or direct responsibility of the Permittees. Permittees were required to notify the Regional Board prior to commencement of construction activities, and to comply with the latest Statewide General Construction Permit. Permittees were also required to develop a SWPPP and monitoring program specific to the Construction Site. Program evaluations conducted during the term of the 2002 MS4 Permit indicated that some Permittees were not submitting or were not aware of the requirement to submit a NOI and subsequent Notice of Termination (NOT) for Permittee Construction Sites. This Order continues the notification requirement.
2. This Order builds upon the requirement of the 2002 MS4 Permit by requiring Permittees to include post-construction BMP information for Permittee Construction Sites meeting WQMP and General Construction Permit criteria along with the NOT submitted to the Executive Officer upon completion of the construction activity. The NOT must include photographs of the completed project, a site map including structural post-construction BMP locations, long term operation and maintenance responsibility information, field verification report and copies of the final field verification reports required under Section XII.I. Permittees are required to develop

a database of post-construction BMPs per Section XII.K.4. for which they are responsible and reference this database in the LIPs.

3. Emergency Permittee public works projects required to protect public health and safety are exempted from these requirements, until the emergency ends, at which time they need to comply with the requirements.

U. MONITORING AND REPORTING

1. 40 CFR 122.48 requires that all NPDES permits specify requirements for monitoring and reporting. Sections 13267 and 13383 of the CWC authorize the Regional Board to require technical and monitoring reports. The Monitoring and Reporting Program, Attachment 3, establishes monitoring and reporting requirements to implement federal and State requirements.

2. An effective monitoring program characterizes Urban Runoff, identifies problem areas, and determines the impact of Urban Runoff on receiving waters and the effectiveness of BMPs. The Principal Permittee administers the CMP for the Permittees. The CMP includes Wet and Dry Season monitoring of MS4 Outfalls and Receiving Waters throughout Riverside County.

3. The Regional Board recognizes the importance of watershed management efforts and regional planning and coordination in the development and implementation of programs and policies related to Receiving Water quality protection, including the Urban Runoff program and TMDL processes. In light of recent TMDLs that have been developed and the expectation of future TMDLs, this Order allows the Permittees to develop a Coordinated Watershed Monitoring Plan that shows the nexus among various Urban Runoff related monitoring programs that the Permittees are participating and the MS4 permit requirements including but not limited to WLA pre-compliance, BMP effectiveness, urban source and trend evaluation, Receiving Water quality and Hydromodification effects monitoring as part of the requirements of the Monitoring and Reporting Program.

4. Multiple entities, such as POTWs, MS4, CAFOs, and other permitted and non-permitted dischargers, discharge into the same water bodies. The discharges from these various sources could potentially affect the water quality of these water bodies even when these dischargers are complying with their discharge permits. Monitoring the Receiving Waters where these multiple types of discharges take place is necessary to determine these water bodies' compliance with Water Quality Objectives and their attainment of Beneficial Uses.

5. In the past, multiple entities have individually monitored the water bodies receiving their discharges to determine impacts to these waters from their discharges. The

monitoring has resulted in fragmented data that is inconsistent in quality, and that has potentially resulted in duplication of resources.

6. The SMC's "Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California", August 2004 Technical Report #419 indicated that "...the lack of mass emissions stations in the inland counties hampers their ability to estimate the proportional contribution of these inland areas to cumulative loads downstream." The SMC consists of representatives from the Counties of Ventura, Los Angeles, Orange, San Bernardino, Riverside, and San Diego and the City of Long Beach. Consistent with this coordinated effort, this Order includes requirements for mass emissions monitoring.
7. Every two years, the Regional Board will assess readily available data to determine if the water bodies within its jurisdiction comply with the Water Quality Objectives and attain the assigned Beneficial Uses. The data reviewed for the assessment comes from sources such as municipalities, POTWs, individual public submittals, TMDL monitoring, and special studies. The data necessary for the assessment is of known and documented quality and generated under the auspices of a Quality Assurance Project Plan (QAPP). The data also is required to be statistically sufficient to assess if the water body is meeting Water Quality Objectives and to determine if water quality is declining over time.
8. A coordinated monitoring effort is needed for each sub-watershed in the Santa Ana Region that will provide statistically sufficient data. These data should be collected with appropriate quality control and quality assurance programs and should be made available in an electronic format to meet assessment objectives.
9. The Regional Board has identified sub-watersheds in the Santa Ana Region where potential duplication of effort is taking place. These sub-watersheds include: the Upper Santa Ana River watershed, MSAR watershed, Lower Santa Ana River watershed, and the San Jacinto River watershed.
10. Regional Board staff proposes to require the various entities discharging into the waterbodies in these sub-watersheds to coordinate monitoring efforts, prepare, submit for approval, and implement a watershed monitoring plan; a QAPP, and a data management, validation, verification mechanism in order to meet the assessment objectives.
11. Under the direction of the MS4 permittees, SCCWRP is coordinating a watershed monitoring effort in Southern California. The Santa Ana Region is included in their monitoring effort. This effort will potentially produce data that will meet the needs of the Regional Board in assessing water quality. This Order requires the Permittees to continue their participation in this regional effort.

V. STANDARD AND SPECIAL PROVISIONS

The dischargers must comply with all standard provisions and with those additional conditions that are applicable under Federal NPDES Regulations 40 CFR122.41 and 40 CFR 122.42.

W. NOTIFICATION OF INTERESTED PARTIES

The Regional Board has notified the dischargers and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet for this Order.

X. CONSIDERATION OF PUBLIC COMMENT

The Regional Board has notified the Permittees, all known interested parties, and the public of its intent to issue WDRs for this discharge and has provided them with an opportunity to submit their written views and recommendations.

The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge and the requirements of this Order. Details of the Public Hearing are provided in the Fact Sheet for this Order.

Y. ALASKA RULE

On March 30, 2000, USEPA revised its regulation that specifies when new and revised State and Tribal Water Quality Standards become effective for CWA purposes (40 CFR 131.21, 65 FR 24641, April 27, 2000). Under the revised regulation (also known as the Alaska rule), USEPA must approve new and revised Water Quality Standards submitted to USEPA after May 30, 2000 before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000 may be used for CWA purposes, whether or not approved by USEPA.

Z. COMPLIANCE WITH CZARA

The Coastal Zone Act Reauthorization Amendments of 1990 (CZARA), Section 6217(g), requires coastal states with approved coastal zone management programs to address Non-Point Source Pollution impacting or threatening coastal water quality. The CZARA addresses five sources of non-point pollution: agriculture, silviculture, urban, marinas, and Hydromodification. This Order addresses the management measures required for the urban category. Compliance with requirements specified in this Order relieves the Permittees for developing a Non-Point Source Plan, for the urban category, under CZARA.

AA. NON-POINT SOURCE DISCHARGES

Consistent with the State Board's 2004 "Policy for the Implementation and

Enforcement of the Nonpoint Source Pollution Control Program," the Regional Board may issue WDRs for Non-Point Source (NPS) Pollutant discharges, such as agricultural irrigation runoff or return flows that are not subject to NPDES requirements, if identified as a significant source of Pollutants. In addition, if the water quality significance of Non-Point Source discharges is not clearly understood, the Regional Board may issue conditional waivers of WDRs to Non-Point Source dischargers, and require monitoring to gather the information necessary to effectively manage these discharges.

BB. STRINGENCY REQUIREMENTS FOR INDIVIDUAL POLLUTANTS. (N/A)

CC. FISCAL RESOURCES

California is experiencing a fiscal crisis unprecedented since the Great Depression. The November 2009 unemployment rate is 12.2 percent in California and 14.7 percent in Riverside County.[19] The seasonally adjusted national unemployment rate in November 2009 is at a 26-year high of 10.2 percent. The Federal Reserve projected that the national unemployment rate, currently at a 26-year high of 9.4 percent, will pass 10 percent by the end of the year. Most federal policymakers said it could take "five or six years" for the economy and the labor market to get back on a path of long-term health.[20] State and local governments are experiencing significant budgetary shortfalls and are reducing staffing and programs across the board. Given this economic environment, priority will be given to preserving the most essential elements of existing Urban Runoff programs and identifying and implementing strategies to improve the efficiency of existing programs in protecting Receiving Waters.

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[19] Employment Development Department, State of California, December 18, 2009. http://www.calmis.ca.gov/file/lfmonth/rive$pds.pdf

[20] http://www.msnbc.msn.com/id/31963779/ns/business-stocks_and_economy/

PERMIT REQUIREMENTS:

IT IS HEREBY ORDERED that the Riverside County Flood Control and Water Conservation District, the County of Riverside, and the incorporated cities of Beaumont, Calimesa, Canyon Lake, Corona, Hemet, Lake Elsinore, Menifee, Moreno Valley, Murrieta, Norco, Perris, Riverside, San Jacinto, and Wildomar, in order to meet the provisions contained in Division 7 of the Water Code and regulations adopted thereunder, and the provisions of the CWA, as amended, and the regulations and guidelines adopted there under, must comply with the following:

III. PERMITTEE RESPONSIBILITIES:

A. RESPONSIBILITIES OF THE PRINCIPAL PERMITTEE:

1. The Principal Permittee shall be responsible for managing the overall Urban Runoff program and shall:

   a. Coordinate revisions to the DAMP.

   b. Implement area-wide management programs, monitoring and reporting programs, and related plans as required by this Order.

   c. Coordinate chemical and biological water quality monitoring and any other monitoring as required by the Executive Officer.

   d. Prepare, coordinate the preparation of, and submit to the Executive Officer, those reports and programs necessary to comply with this Order.

   e. Provide staff support to the Management Steering Committee (Appendix 4, Glossary) to address Urban Runoff management policies for the Permit Area and coordinate the review, and necessary revisions to the DAMP and Implementation Agreement. The Management Steering Committee will continue to meet consistent with the requirements of Section XVII.D of this Order.

   f. Coordinate and conduct Technical Committee (Appendix 4) meetings consistent with the requirements of Section XVII.D of this Order. The Technical Committee will continue to direct the development of the DAMP and coordinate the implementation of the overall Urban Runoff program.

   g. Take the lead role in initiating and developing area-wide programs and activities necessary to comply with this Order.

h. Coordinate activities and participate in committees/subcommittees formed to comply with this Order.

i. Coordinate the implementation of this Order with the Regional Board and Co-Permittees, including the submittal of joint reports, plans, and programs as required under this Order.

j. Provide technical and administrative support to the Co-Permittees, including informing them of the status of known pertinent municipal programs, pilot projects, and research studies.

k. Coordinate with the Co-Permittees the implementation and necessary updates to Urban Runoff quality management programs, monitoring and reporting programs, implementation plans, public education, other Pollution Prevention measures, household Hazardous Waste collection, and BMPs outlined in the DAMP and take other actions consistent with the MEP standard.

l. Gather and disseminate information on the status of statewide Urban Runoff programs and evaluate the information for potential use in the execution of this Order. Hold workshops focused on Urban Runoff regulatory requirements, BMPs, and other related topics.

m. Compile information provided by the Co-Permittees and determine the effectiveness of the overall Urban Runoff program in attaining Receiving Water Quality Standards. This determination must include a comparative analysis of monitoring data to the applicable Water Quality Objectives for Receiving Waters as specified in Chapter 4 of the Basin Plan.

n. Solicit and coordinate public input for major changes to the Urban Runoff management programs and the implementation thereof.

o. Coordinate the development and implementation of procedures and performance standards, to assist in the consistent implementation of BMPs consistent with the MEP standard, as well as Urban Runoff management programs, among the Co-Permittees.

p. Participate in watershed management programs and regional and/or statewide monitoring and reporting programs.

q. In collaboration with the Co-Permittees, other MS4 Programs and/or CASQA, develop guidelines for defining expertise and competencies of storm water program managers and inspectors and develop and submit for approval a training program for various positions in accordance with these guidelines and Section XV of this Order.

r. Within 6 months of adoption of this Order, the Principal Permittee shall develop a library of BMP performance reports, and revise the library annually thereafter. At a minimum, obsolete performance reports should be removed and updated reports from the Permittees, CalTrans, CASQA, American Society of Civil Engineers or other appropriate sources that include more effective and proven BMPs should be added. The library may use national, statewide or regional reports. The purpose of this library is to facilitate the Permittees approval of BMPs, review and approval of WQMPs, etc.

s. Within 6 months of adoption of this Order, the Principal Permittee shall coordinate a review of the DAMP with the Co-Permittees to determine the need for update or revisions to ensure compliance with the requirements of this Order and establish a schedule for those revisions.

2. The activities of the Principal Permittee shall also include, but not be limited to, the following for MS4 owned or operated by the Principal Permittee:

   a. To cause appropriate enforcement actions as necessary against IC/IDs to its MS4 to ensure compliance with Urban Runoff management programs, ordinances and implementation plans, including physical removal of Illicit Connections and prohibition of Illegal Discharges.

   b. Ensure that applicants for encroachment permits for permanent connection to its MS4 facilities are notified in writing of their obligations to comply with Storm Water Ordinances, WQMP, and General Stormwater Permit requirements. The Principal Permittee shall make sure that encroachment activities within the limits of its rights-of-way comply with the General Construction Permit post construction standards. An encroachment project with a WQMP reviewed and approved by the Co-Permittee with jurisdictional authority may constitute compliance with the General Construction Permit post construction standards[21].

   c. Conduct inspections and maintain the MS4 facilities over which it has jurisdiction.

   d. Review and revise, if necessary, those agreements to which it is a party and those regulations and policies it deems necessary to provide adequate legal authority to maintain the MS4 facilities for which it has jurisdiction and to take those actions required of it by this Order and the federal Storm Water Regulations (see Section VIII);

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[21] The State General Construction Permit Order No. 2009-0009-DWQ, Section XII

e. Monitor, document, and report that appropriate enforcement actions against Illegal Discharges to the MS4 facilities for which it has jurisdiction are taken and pursued as necessary to ensure compliance with Urban Runoff management programs, implementation plans, and regulations and policies, including physical elimination of IC/IDs (see Section IX);

f. Continue to respond or cause the appropriate entity or agency to respond to emergency situations such as accidental spills, leaks, and IC/IDs to prevent or reduce the discharge of Pollutants to its MS4 facilities and to the Receiving Waters (see Section XVI).

g. Track, monitor, and keep training records of all personnel involved in the implementation of the Principal Permittee's Urban Runoff management program.

B. RESPONSIBILITIES OF THE CO-PERMITTEES:

1. Each Co-Permittee shall complete a LIP, in conformance with Section IV of this Order and the approved LIP template.

2. Each Co-Permittee shall be responsible for managing the Urban Runoff program within its jurisdiction and shall:

   a. Maintain adequate legal authority to control the contribution of Pollutants to the MS4 and enforce those authorities.

   b. Conduct inspections of and maintain its MS4 facilities in accordance with the criteria developed pursuant to Section XIV.

   c. Continue to implement management programs, monitoring and reporting programs, appropriate BMPs listed in the DAMP and LIP, and related plans as required by this Order and take such other actions consistent with the MEP standard.

   d. Continue to seek sufficient funding for the area-wide Urban Runoff management plan, local Urban Runoff program management, Urban Runoff enforcement, public outreach and education activities and other Urban Runoff related program implementation.

   e. Continue to coordinate with other public agencies as appropriate, to facilitate the implementation of this Order and the DAMP/LIP.

   f. Ensure that applicants for encroachment permits for permanent connection to Permittee MS4 facilities are notified of their obligations to comply with Storm

Water Ordinances, WQMP, and the State General Construction Permit post construction standards. The Permittees shall enforce their Storm Water Ordinances to the extent of their legal authority. An encroachment project with a WQMP reviewed and approved by the Co-Permittee who owns the MS4 may constitute compliance with the General Construction Permit post construction standards[22].

g. Maintain up-to-date MS4 facility maps. Annually review these maps and if necessary, submit revised maps to the Principal Permittee with the information required for preparation of the Annual Report.

h. Prepare and submit to the Principal Permittee in a timely manner specific reports/information, related to the Co-Permittees' Urban Runoff management program, necessary to develop an Annual Report for submittal to the Executive Officer.

3. The Co-Permittees' activities shall include, but not be limited to, the following:

a. Participate in the Management Steering Committee and the Technical Committee meetings consistent with the requirements of Section XVII.D of this Order.

b. Conduct and coordinate with the Principal Permittee surveys and monitoring needed to identify Pollutant sources and drainage area characteristics within its jurisdiction. Where an Illegal Discharge crosses jurisdictional boundaries, to the extent feasible coordinate with neighboring jurisdictions to locate and end the Illegal Discharge.

c. Prepare and submit reports to the Principal Permittee to facilitate compilation of joint reports to the Regional Board in compliance with submittal deadlines.

d. Participate in the development and implementation of plans, strategies, management programs, monitoring and reporting programs that are proposed by the Principal Permittee, Technical Committee, or the Management Steering Committee to comply with this Order.

e. Participate in subcommittees formed by the Principal Permittee, Technical Committee, or the Management Steering Committee to comply with this Order.

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[22] The State General Construction Permit Section XIII

f. Respond to or arrange for the appropriate entity or agency to respond to Emergency Situations such as accidental spills, leaks, IC/IDs, etc., to prevent or reduce the discharge of Pollutants to their MS4 facilities and the Receiving Waters.

g. Continue to pursue enforcement actions as necessary within its jurisdiction for violations of Storm Water Ordinances, and other elements of its Urban Runoff management program.

C. IMPLEMENTATION AGREEMENT

The Permittees shall allow any cities that were not signatories to the original Implementation Agreement but have been subsequently added to this Order to participate in the Implementation Agreement. The Permittees must annually review their Implementation Agreement and determine the need, if any, for additional revision. Beginning with the first Annual Report after adoption of this Order the Permittees must include the findings of this review and a schedule for any necessary revision(s) to the Implementation Agreement, if any. A copy of the signature page and any revisions to the Agreement shall be included in the Annual Report.

IV. LOCAL IMPLEMENTATION PLAN:

A. Within 6 months of adoption of this Order, the Permittees shall develop and submit for approval of the Executive Officer a LIP template. The LIP template shall be amended as the provisions of the DAMP are amended to address the requirements of this Order. The LIP template shall facilitate a description of the Co-Permittee's individual programs to implement the DAMP, including the organizational units responsible for implementation and identify positions responsible for Urban Runoff program implementation. The description shall specifically address:

1. Overall program management, including internal reporting requirements and procedures for communication and accountability;
   a. Interagency or interdepartmental agreements necessary to implement the Permittee's Urban Runoff program
   b. A summary of fiscal resources available to implement the Urban Runoff program;
   c. The ordinances, agreements, plans, policies, procedures and tools (e.g. checklists, forms, educational materials, etc.) used to execute the DAMP, including legal authorities and enforcement tools.
   d. Summarize procedures for maintaining databases required by the Permit;
   e. Describe internal procedures to ensure and promote accountability;

2. WQBELs to implement the TMDLs (Section VI.D);
3. Receiving Water Limitations (Section VII.D).
4. Legal authority/enforcement (Section VIII)
   a. Identify enforcement procedures, and
   b. Identify actions and procedures for tracking return to compliance;
5. Illicit Connections/Illegal Discharges (IC/ID); Litter, Debris and Trash Control (Section IX).

   The procedures and the staff positions responsible for different components of their IC/ID and Illegal Discharge Detection and Elimination (IDDE) Programs.
6. Sewage Spills, Infiltration into the MS4 Systems from Leaking Sanitary Sewer Lines, Septic System Failures, and Portable Toilet Discharges (Section X)

   A description of the interagency or interdepartmental sewer spill response coordination within each Permittee's jurisdiction.
7. Co-Permittee inspection programs(Section XI),
   a. Maintenance of Construction, Industrial, Commercial, and Post-Construction BMP databases;
   b. Procedures for incorporating erosion and sediment control BMPs into the permitting of Construction Sites (Section XI.B)
   c. Implementation of the Residential Program (Section XI.E.)
   d. Specify the verification procedure(s) and any tools utilized to verify that coverage under the General Construction Permit;
8. New Development (Including Significant Redevelopment) (Section XII)
   a. A list of discretionary maps and permits over which the Permittee has the authority to require WQMPs;
   b. Permittee procedures to implement the Hydromodification Management Plan.
   c. Permittee procedures and tools to implement the WQMP.(Sections XII.H, XII.I & XII.K)
   d. Permittee procedures for Municipal Road Projects (Section XII.F).
   e. A description of the credits programs or other in-lieu programs implemented (Section XII.G).
9. Public education and outreach (Section XIII)
10. Permittee Facilities and Activities (Section XIV)
    a. A description of the Permittee's MS4 facilities;
    b. At a minimum a list of facilities that include the following:

i. Parking facilities;

ii. Fire fighting training facilities;

iii. Facilities and activities discharging directly to environmentally sensitive areas such as 303(d) listed waterbodies or those with a RARE beneficial use designation;

iv. POTWs (including water and wastewater treatment plants) and sanitary sewage collection systems;

v. Solid waste transfer facilities;

vi. Land application sites;

vii. Corporate yards including maintenance and storage yards for materials, waste, equipment and vehicles;

viii. Household hazardous waste collection facilities;

ix. Municipal airfields;

x. Maintenance Facilities serving parks and recreation facilities;

xi. Special event venues following special events (festivals, sporting events);

xii. Other municipal areas and activities that the Permittee determines to be a potential source of Pollutants.

11. Compliance of Permittee Facilities and Activities with the General Construction Permit and De-Minimus Permit (Section XIV.G).

12. Training Program for Storm Water Managers, Planners, Inspectors and Municipal Contractors (Section XV);

    a. Training log forms

    b. Identify departments and positions requiring training

B. Within 12 months of approval of the LIP template, and amendments thereof, by the Executive Officer, each Permittee shall complete a LIP[23], in conformance with the LIP template. The LIP shall be signed by the principal executive officer or ranking elected official or their duly authorized representative pursuant to Section XX.M of this Order.

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[23] As the Principal Permittee is not a general purpose government, some portions of the NPDES MS4 Program may not be applicable to it. The Principal Permittee should identify the basis for its exclusion from the applicable program elements in the appropriate LIP section.

C. Each Permittee shall annually review and evaluate the effectiveness of its Urban Runoff programs to determine the need for revisions to its LIP as necessary in compliance with Section VIII.H of this Order, and document revisions in the Annual Report.

V. DISCHARGE PROHIBITIONS:

A. In accordance with the requirements of 40 CFR 122.26(d)(2)(i)B) and 40 CFR 122.26(d)(2)(i)(F), the Permittees shall prohibit IC/IDs (see Appendix 4) from entering the MS4.

B. The discharge of Urban Runoff from the MS4 to Receiving Waters containing Pollutants, including trash and debris, that have not been reduced consistent with the MEP standard is prohibited.

C. Non-storm Water discharges from public agency activities into Waters of the US are prohibited unless the Non-storm Water discharges are permitted by a NPDES permit, granted a waiver, or as otherwise specified in Section VI, below.

D. Discharges from the MS4 shall be in compliance with the discharge prohibitions contained in Chapter 5 of the Basin Plan.

E. Discharges of Urban Runoff from the Permittee's MS4 shall not cause or contribute to a condition of Pollution, Contamination, or Nuisance (as defined in CWC Section 13050).

F. The discharge of any substances in concentrations toxic to animal or plant life is prohibited.

VI. EFFLUENT LIMITATIONS, DISCHARGE SPECIFICATIONS AND OTHER TMDL RELATED REQUIREMENTS

For purposes of this Order, a discharge may include storm water or other types of discharges identified below.

A. ALLOWED DISCHARGES:

The discharges identified need not be prohibited by the Permittees unless identified by the Permittees or the Executive Officer as a significant source of Pollutants. The DAMP shall include public education and outreach activities directed at reducing these discharges even if they are not substantial contributors of Pollutants to the MS4.

1. Discharges composed entirely of storm water;

2. Air conditioning condensate;
3. Irrigation water from agricultural sources ;
4. Discharges covered by a NPDES Permit, WDRs, or waivers issued by the Regional Board or State Board.
5. Discharges from landscape irrigation, lawn/garden watering and other irrigation waters. These shall be minimized through public education and water conservation efforts, as prescribed under this Order Section XI.E. Residential Program.
6. Passive foundation drains[24];
7. Passive footing drains[25];
8. Water from crawl space pumps[26];
9. Non-commercial vehicle washing,(e.g. residential car washing (excluding engine degreasing) and car washing fundraisers by non-profit organization);
10. Dechlorinated swimming pool discharges (cleaning wastewater and filter backwash shall not be discharged into the MS4 or to Waters of the US)
11. Diverted stream flows[27];
12. Rising ground waters[28] and natural springs;
13. Uncontaminated ground water infiltration as defined in 40 CFR 35.2005 (20) and uncontaminated pumped groundwater (as defined in Appendix 4, glossary),
14. Flows from riparian habitats and wetlands;
15. Emergency fire fighting flows (i.e., flows necessary for the protection of life and property do not require BMPs and need not be prohibited. However, appropriate BMPs to reduce the discharge of Pollutants to the MEP must be implemented when they do not interfere with health and safety issues [see also Appendix K of the DAMP]).
16. Waters not otherwise containing Wastes as defined in California Water Code Section 13050 (d), and
17. Other types of discharges identified and recommended by the Permittees and approved by the Regional Board.

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[24] Allowed discharges only if the source water drained from the foundation is storm water or uncontaminated groundwater. Discharges from contaminated groundwater may require coverage under the De Minimus Permit (Order No. R8-2009-0003, NPDES No. CAG998001) or General Groundwater Cleanup Permit (Order No. R8-2007-0008, NPDES Permit No CAG918001) or its latest version.

[25] See footnote 24, above.

[26] Allowed discharges only if the discharge is uncontaminated, otherwise permit coverage under the De Minimus Permit or Order No. 2006-0008-DWQ (NPDES No. CAG990002), General NPDES Permit for Discharges from Utility Vaults and Underground Structures to Surface Waters (General Permit-Utility Vaults).

[27] Diversion of stream flows that encroach into Waters of the US requires a 404 permit from the US Army Corps of Engineers and a 401 Water Quality Certification from the Regional Board. Stream diversion that requires active pumping also requires coverage under the De Minimus Permit, Order No. R8-2009-0003.

[28] Discharge of rising ground water and natural springs into surface water is only allowed if groundwater is uncontaminated. Otherwise, coverage under the General Groundwater Cleanup Permit, Order No. R8-2007-0008 may be required.

When types of discharges listed above are identified as a significant source of Pollutants to Waters of the US, a Permittee must either: prohibit the discharge category from entering the MS4 or ensure that Source Control BMPs and Treatment Control BMPs are implemented to reduce or eliminate Pollutants resulting from the discharge. The Permittees shall evaluate the permitted discharges, as listed above to determine if any are a significant source of Pollutants to the MS4 and notify the Executive Officer if any are a significant source of Pollutants to the MS4.

B. DISCHARGE SPECIFICATIONS FOR DISCHARGES FROM PERMITTEE OWNED AND/OR OPERATED FACILITIES AND ACTIVITIES - DE-MINIMUS DISCHARGES[29] :

The following types of discharges from Permittee owned and/or operated facilities and activities are authorized by this Order provided they are in compliance with the terms and conditions of the General De Minimus Permit except that separate coverage under that permit is not required.

1. *Discharges from potable water sources, including water line flushing, superchlorinated water line flushing, fire hydrant system flushing, and hydrostatic test water from pipelines, tanks and vessels*: These discharges shall be dechlorinated to a concentration of 0.1 ppm[30] or less, pH adjusted if necessary, and volumetrically and velocity controlled to prevent re-suspension of sediments.

2. *Discharges from lawn, greenbelt and median watering and other irrigation runoff[31] from non-agricultural operations*: These discharges shall be minimized through requirements consistent with Section 5.3 of the DAMP and Section XIV of this Order.

3. *Dechlorinated swimming pool discharges:* Dechlorinated to a concentration of 0.1 ppm[32] or less, pH adjusted and reoxygenated if necessary, and volumetrically and velocity controlled to prevent resuspension of sediments. Swimming pool cleaning wastewater and filter backwash shall not be discharged to the MS4.

4. *Discharges from facilities that extract, treat and discharge water diverted from Waters of the US*: These discharges shall meet the following conditions:

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[29] General De Minimus Permit for Discharges to Surface Waters, Order NO. R8-2009-0003, NPDES No. CAG 998001 (General De Minimus Permit).
[30] Total residual chlorine = 0.1 mg/l or parts per million (ppm) or less; compliance determination shall be at a point before the discharge mixes with any Receiving Water.

[31] Non-agricultural irrigation using recycled water must comply with the statewide permit for Landscape Irrigation Using Recycled Water and the State Department Health guidelines.
[32] See footnote 30.

a. The discharges to Waters of the US must not contain Pollutants added by the treatment process or Pollutants in greater concentration than the influent;

b. The discharge must not cause or contribute to a condition of erosion;

c. Be in compliance with Section 401 of the CWA; and

d. Conduct monitoring in accordance with Section XIX of this Order.

5. *Construction dewatering wastes:* The maximum daily concentration limit for Total Suspended Solids (TSS) shall not exceed 75 mg/L; sulfides shall not exceed 0.4 mg/L; total petroleum hydrocarbons shall not exceed 0.1 mg/L; and oil and grease shall not exceed 15 mg/L.

6. *For all de-minimus type of discharges:* The pH of the discharge shall be within 6.5 to 8.5 pH units and there shall be no visible oil and grease in the discharge.

7. Table 4-1 of the Basin Plan incorporates TDS/TIN objectives for groundwater and surface waters within the Santa Ana Region. Permittees discharging to those Receiving Waters shall ensure compliance with the following for Dry Season conditions:

   a. For discharges to surface waters where groundwater will not be affected by the discharge, the maximum daily concentration (mg/L) of TDS and/or TIN of the effluent shall not exceed the Water Quality Objectives for the Receiving Water where the effluent is discharged, as specified in Table 4-1 of the Basin Plan[33].

   b. For discharges to surface waters where the groundwater will be affected by the discharge, the TDS and/or TIN concentrations of the effluent shall not exceed the Water Quality Objectives for the surface water where the effluent is discharged and the affected groundwater management zone, as specified in Table 4-1 of the Basin Plan. The more restrictive Water Quality Objectives shall govern. However, treated effluent exceeding the groundwater management zone Water Quality Objectives may be returned to the same management zone from which it was extracted without reduction of the TDS or TIN concentrations so long as the concentrations of those constituents are no greater than when the groundwater was first extracted. Incidental increases in the TDS and TIN concentrations (such as may occur during air stripping) of treated effluent will not be considered increases for the purposes of determining compliance with this discharge specification.

8. The Regional Board may add categories of Non-storm Water discharges that are not significant sources of Pollutants or remove categories of Non-storm Water discharges

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[33] Resolution No. R8-2004-0001

listed above based upon a finding that the discharges are a significant source of Pollutants.

C. NON-POINT SOURCE (NPS) DISCHARGES:

The NPS discharges are being addressed through the Non-Point Source Program.

D. WATER QUALITY BASED EFFLUENT LIMITATIONS TO IMPLEMENT THE TOTAL MAXIMUM DAILY LOADS (TMDLs)

1. The MIDDLE SANTA ANA RIVER (MSAR) WATERSHED BACTERIA INDICATOR TMDL

Interim WQBELs (effective upon adoption of this Order)

a. The MSAR Permittees[34] as part of the MSAR Task Force (Table 5) shall:

i. Continue to implement the watershed-wide water quality monitoring program (including any future amendments thereto) approved by the Regional Board (Resolution No. R8-2007-0046) as per Task 3 of the MSAR TMDL Implementation Plan.

ii. Submit reports summarizing all relevant data from the MSAR watershed-wide water quality monitoring program. Beginning in 2010, the cool (or wet) season report is due to the Executive Officer by May 31st of each year (for monitoring conducted from November 1st through March 31st) and the warm (dry) season report is due to the Executive Officer by December 31st of each year (for monitoring conducted from April 1st through October 31st).

iii. Submit comprehensive reports every three years summarizing the data collected for the preceding 3 year period and evaluating progress towards achieving the Urban WLA by the dates specified in the TMDL. The first report is due to the Executive Officer on February 15, 2010.

iv. Continue to implement the approved (Regional Board Resolution No. R8-2008-0044) USEP developed as per Task 4.1 of the MSAR TMDL Implementation Plan. The USEP must describe the specific methods that will be used to identify urban sources, strategies, and BMPs to address

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[34] Riverside County MS4 Permittees in the MSAR watershed (County of Riverside, and the Cities of Corona, Norco, Riverside are collectively referred to as the "MSAR Permittees")

those sources. Submit semi-annual reports on January 31st and July 31st of each year as required under the approved USEP, and any amendments thereto. In years where the comprehensive report referenced in VI.D.1.a.iii above is due on February 15, the comprehensive report, Dry Season report (Due December 31st) and the January 31st USEP reports may be combined into a single submittal due February 15th

v. Revise the DAMP as specified in Task 4.3 of the MSAR-TMDL Implementation Plan. Summarize any such revisions in the annual report due to the Executive Officer by November 30 of each year.

vi. Revise the WQMP as specified in Task 4.5 of the MSAR TMDL Implementation Plan. Summarize any such revisions in the Annual Report due to the Executive Officer by November 30 of each year.

vii. Amend the LIP to be consistent with the revised DAMP and WQMPs within 90 days after said revisions are approved by the Regional Board. Summarize any such LIP amendments in the Annual Report due to the Executive Officer by November 30 of each year.

Final WQBELs for MSAR Bacterial Indicator TMDL under Dry Season Conditions

b. The final WQBELs for Bacterial Indicators during the Dry Season shall be achieved by December 31, 2015. These final Effluent Limits shall be considered effective for enforcement purposes on January 1, 2016.

c. The Final WQBELs for MSAR Bacterial Indicator TMDL during the Dry Season shall be developed and implemented in the following manner:

i. The MSAR Permittees shall prepare for approval by the Regional Board a Comprehensive Bacteria Reduction Plan (CBRP) describing, in detail, the specific actions that have been taken or will be taken to achieve compliance with the Urban WLA during the Dry Season (April 1st through October 31st) by December 31, 2015. The CBRP must include:

(1) The specific ordinance(s) adopted to reduce the concentration of Bacterial Indicator in urban sources.

(2) The specific BMPs implemented to reduce the concentration of Bacterial Indicator from urban sources and the water quality improvements expected to result from these BMPs.

(3) The specific inspection criteria used to identify and manage the urban sources most likely causing exceedances of Water Quality Objectives for Bacterial Indicators.

(4) The specific regional treatment facilities and the locations where such facilities will be built to reduce the levels of Bacterial Indicator discharged from urban sources and the expected water quality improvements to result when the facilities are complete.

(5) The scientific and technical documentation used to conclude that the CBRP, once fully implemented, is expected to achieve compliance with the Urban WLA for Bacterial Indicator by December 31, 2015.

(6) A detailed schedule for implementing the CBRP. The schedule must identify discrete milestones to assess satisfactory progress toward meeting the Urban WLA during the Dry Season by December 31, 2015. The schedule must also indicate which agency or agencies are responsible for meeting each milestone.

(7) The specific metric(s) that will be established to demonstrate the effectiveness of the CBRP and acceptable progress toward meeting the Urban WLA for Bacterial Indicator by December 31, 2015.

(8) The DAMP, WQMP and LIPs shall be revised consistent with the CBRP no more than 180 days after the CBRP is approved by the Regional Board.

(9) Detailed descriptions of any additional BMPs planned, and the time required to implement those BMPs, in the event that data from the watershed-wide water quality monitoring program indicate that Water Quality Objectives for Bacterial Indicator are still being exceeded after the CBRP is fully implemented.

(10) A schedule for developing a CBRP needed to comply with the Urban WLA for Bacterial Indicator during the Wet Season (November 1st thru March 31st) to achieve compliance by December 31, 2025.

ii. The draft CBRP must be submitted to the Regional Board by December 31, 2010. The Permittees may submit the plan individually, jointly or through a collaborative effort with other urban dischargers such as the existing MSAR-TMDL Task Force. Regional Board staff will review the draft CBRP and recommend necessary revisions no more than 90 days after receiving the draft CBRP. The MSAR Permittees must submit the final version of the CBRP no more than 90 days after receiving the comments from Regional

Board staff. The Regional Board will schedule a public hearing to consider approving the CBRP, as a final WQBEL for the Dry Season Urban WLA, no more than 120 days after the final plan is submitted by the MSAR Permittees. In approving the CBRP as the final WQBELs, the Regional Board shall find that the CBRP, when fully implemented, shall achieve the Urban WLA for Bacterial Indicator by December 31, 2015.

iii. Once approved by the Regional Board, the CBRP shall be incorporated into this Order as the final WQBELs for Bacterial Indicator for the Dry Season. Based on BMP effectiveness analysis, the CBRP shall be updated, if necessary. The updated CBRP shall be implemented upon approval by the Regional Board.

d. Should the process set forth in Section VI.D.1.c, above not be completed by January 1, 2016, then the Urban WLA for the Dry Season specified in the MSAR-TMDL shall become the final numeric WQBELs for Bacterial Indicator in the Dry Season as follows:

i. WLA for Fecal Coliform from Urban Sources for the Dry Season (April 1st through October 31st)[35]
5-sample/30-day logarithmic mean less than 180 organisms/100mL and not more than 10% of the samples exceed 360 organisms/100mL for any 30-day period.

ii. WLA for *E. Coli* from Urban Sources for the Dry Season (April 1st through October 31st)[36]
5-sample/30-day logarithmic mean less than 113 organisms/100 mL and not more than 10% of the samples exceed 212 organisms/100mL for any 30-day period.

Final WQBELs for Bacterial Indicator during the Wet Season (effective Jan. 1, 2026)

In the event this Order is still in effect on December 31, 2025, and the Regional Board has not adopted alternative final WQBEL during the Wet Season by that date, then the Urban WLAs specified in the MSAR TMDL for the Wet Season

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[35] 5-sample/30-day logarithmic mean less than 180 organisms/100mL and not more than 10% of the samples exceed 360 organisms/100mL for any 30-day period.

[36] 5-sample/30-day logarithmic mean less than 113 organisms/100 mL and not more than 10% of the samples exceed 212 organisms/100mL for any 30-day period.

(November 1st through March 31st) will automatically become the final numeric WQBEL for the MSAR Permittees on January 1, 2026.

2. **LAKE ELSINORE/CANYON LAKE (SAN JACINTO WATERSHED) NUTRIENT TMDLS**

Interim WQBELS:

a. *Lake Elsinore In-Lake Sediment Nutrient Reduction Plan:* Pursuant to Resolution No. R8-2007-0083, or as amended by subsequent adopted Regional Board resolutions, each LE/CL Permittee shall continue to implement the approved strategy for reducing in-lake sediment nutrient loads as summarized in Table 7, below:

Table 7 - Lake Elsinore In-lake Sediment Nutrient Reduction Strategy

Lake Elsinore In-lake Sediment Reduction Strategy Task	Due Date
Submit Phase 2 Alternatives	December 31, 2010*
Submit O&M Agreement for Fishery Management Program	December 31, 2010*
Submit O&M Agreement for Aeration and Mixing Systems	December 31, 2010*
Submit Phase 2 Projects Plans	June 30, 2011*
Complete Phase 2 Project Implementation	December 31, 2014
Implement in-lake and watershed monitoring programs	Annual reports due August 31 every year.

*Within 60 days of receipt of comments from Regional Board staff, Permittees shall submit a final revised plan that will be acceptable for adoption by the Regional Board, unless otherwise directed by the Executive Officer.

b. Lake Elsinore/Canyon Lake Model Update Plan: Pursuant to Resolution No. R8-2007-0083, or as amended by subsequent adopted Regional Board resolutions, each LE/CL Permittee shall continue to implement the Model Update Plan as per the schedule summarized Table 8 below: The Model Update Plan shall specify how the Permittees will determine compliance with the WLAs.

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Table 8 - Lake Elsinore/Canyon Lake Model Update Plan

Model Update Task	Due Date
Linkage Analysis Study	August 31, 2010
Watershed Source Loading Study	August 31, 2010
Model Evaluation	December 31, 2010
Construct/Calibrate Model	June 30, 2011
Conduct Model Scenarios	August 31, 2011
Model Update Final Report	November 30, 2011

c. Revise the DAMP, WQMP and LIPs as necessary to implement the interim WQBEL compliance plans submitted pursuant to paragraph a and b of this section and summarize all such revisions in the Annual Report.

Final WQBELs (Effective December 31, 2020)

d. To achieve compliance with TMDL WLAs as per the TMDL Implementation Plans, the LE/CL Permittees shall submit a Comprehensive Nutrient Reduction Plan (CNRP) by December 31, 2011 describing, in detail, the specific actions that have been taken or will be taken to achieve compliance with the urban WLA by December 31, 2020. The CNRP must include the following:

i. Evaluation of the effectiveness of BMPs and other control actions implemented. This evaluation shall include the following:

(a) The specific ordinance(s) adopted or proposed for adoption to reduce the concentration of nutrient in urban sources.

(b) The specific BMPs implemented to reduce the concentration of urban nutrient sources and the water quality improvements expected to result from these BMPs.

(c) The specific inspection criteria used to identify and manage the urban sources most likely causing exceedances of water quality objectives for nutrients.

(d) The specific regional treatment facilities and the locations where such facilities will be built to reduce the concentration of nutrient discharged from urban sources and the expected water quality improvements to result when the facilities are complete.

and

ii. Proposed method for evaluating progress towards compliance with the nutrient WLA for Urban Runoff. The progress evaluation shall include:

(a) The scientific and technical documentation used to conclude that the CNRP, once fully implemented, is expected to achieve compliance with the urban waste load allocation for nutrient by December 31, 2020.

(b) A detailed schedule for implementing the CNRP. The schedule must identify discrete milestones decision points and alternative analyses necessary to assess satisfactory progress toward meeting the urban waste load allocations for nutrient by December 31, 2020. The schedule must also indicate which agency or agencies are responsible for meeting each milestone.

(c) The specific metric(s) that will be established to demonstrate the effectiveness of the CNRP and acceptable progress toward meeting the urban waste load allocations for nutrient by December 31, 2020.

(d) The DAMP, WQMP and LIPs shall be revised consistent with the CNRP no more than 180 days after the CNRP is approved by the Regional Board.

(e) Detailed descriptions of any additional BMPs planned, and the time required to implement those BMPs, in the event that data from the watershed-wide water quality monitoring program indicate that water quality objectives for nutrient are still being exceeded after the CNRP is fully implemented.

e. The draft CNRP must be submitted to the Regional Board by December 31, 2011. The LE/CL Permittees may submit the plan individually, jointly or through a collaborative effort with other urban dischargers such as the existing LE/CLTMDL Task Force. Regional Board staff will review the document and recommend necessary revisions no more than 90 days after receiving the draft plan. The LE/CL Permittees must submit the final version of the plan no more than 90 days after receiving the comments from Regional Board staff. The Regional Board will schedule a public hearing to consider approving the CNRP, as a final water quality-based effluent limitation for the Nutrient WLA, no more than 90 days after the final plan is submitted by the LE/CL Permittees. In approving the CNRP as the final WQBELs, the Regional Board shall make a finding that the CNRP, when fully implemented, shall achieve the urban WLA for nutrient by December 31, 2020; and,

f. Once approved by the Regional Board, the CNRP shall be incorporated into this Order as the final WQBELs for LE/CL Nutrient TMDL. Based on BMP effectiveness analysis, the CNRP shall be updated, if necessary. The updated CNRP shall be implemented upon approval by the Regional Board.

g. Compliance with the WLA is based on a 10-year running average. Hence, data collection consistent with the approved Phase 2 LE/CL TMDL monitoring program required in the Monitoring and Reporting Program must commence by December 31, 2010[37].

h. A summary of all relevant data from water quality monitoring programs shall be submitted in the Annual Report. This will include an evaluation of compliance with the LE/CL TMDL by reporting the effectiveness of the BMPs implemented in the watershed to control nutrient inputs into the lake from Urban Runoff pursuant to Regional Board Resolution No. R8-2006-0031 and R8-2007-0083, or as amended by subsequent Regional Board adopted resolutions.

i. The DAMP, WQMP and LIPs shall be revised as necessary to implement the plans submitted pursuant to paragraph a through h of this section and summarize all such revisions in the Annual Report.

j. In the event that the Regional Board has not adopted alternative final WQBELs, in accordance with Section VI.D.2.d., above, by December 31, 2020, the Urban WLAs specified in Tables 9 and 10, below, shall automatically become the final numeric WQBELs for the LE/CL Permittees to be achieved by December 31, 2020. These final Effluent Limits shall be considered effective for enforcement purposes on January 1, 2021.

Table 9 - Canyon Lake Nitrogen and Phosphorus Waste Load and Load Allocations[a]

Canyon Lake Nutrient TMDL	Final Total Phosphorus Waste Load Allocation (kg/yr)[b, c]	Final TN Waste Load Allocation (kg/yr)[b, c]
Urban	306 (675 lbs/yr)	3,974 (8763 lbs/yr)
Septic systems	139 (306 lbs/yr)	4,850 (10692 lbs/yr)

[a] The WLAs for Canyon Lake apply to those land uses located upstream of Canyon Lake.

[b] Final WLA compliance to be achieved by December 31, 2020.

[c] TMDL and WLA specified as 10-year running average.

Table 10 - Lake Elsinore Nitrogen and Phosphorus Waste Load and Load Allocations[a]

[37] Resolution No. R8-2004-0037 requires initiation of the Phase 2 watershed-wide Wet Season monitoring upon completion of the Phase 1 in-lake monitoring program. Regional Board staff is currently in discussion with LE/CL TMDL Task Force regarding this transition and are expected to identify reductions in Phase 1 monitoring program that will offset the costs of the enhanced Phase 2 program.

Lake Elsinore Nutrient TMDL	Final Total Phosphorus WLA (kg/yr)[b, c]	Final TN WLA (kg/yr)[c, d]
Urban	124 (273.3 lbs/yr)	349 (769.4 lbs/yr)
Septic systems	69 (152 lbs/yr)	608 (1340 lbs/yr)

[a] The Lake Elsinore TMDL WLAs for septic systems only apply to those land uses located downstream of Canyon Lake.

[b] Final compliance to be achieved by December 31, 2020.

[c] TMDL and WLA specified as 10-year running average.

[d] WLA for supplemental water should be met as a 5 year running average by December 31, 2020.

[e] WLA for Canyon Lake overflows

k. The LE/CL Permittees may demonstrate compliance with the WLAs using either of the following two methods:

   i. Directly, using relevant monitoring data and approved and approved modeling procedures to estimate actual nitrogen and phosphorus loads being discharged to the lakes, or,

   ii. Indirectly, using water quality monitoring data and other biological metrics approved by the Regional Board, to show Water Quality Standards are being consistently attained (as measured by the response targets identified in the LE/CL TMDL).

l. The TMDLs explicitly support the trading of pollutant allocations among sources to the extent that such allocation tradeoffs optimize point and non-point source control strategies to achieve the WQBELs in the most efficient manner.

VII. RECEIVING WATER LIMITATIONS

A. Urban Runoff discharges from the Permittees' MS4 shall not cause or contribute to exceedances of Receiving Water Quality Standards (as defined by Beneficial Uses and Water Quality Objectives in Chapter 4 of the Basin Plan) for surface waters or ground waters.

B. The DAMP and its components, including the LIPs, must be designed to achieve compliance with Receiving Water Limitations associated with discharges of Urban Runoff to the MEP. It is expected that compliance with Receiving Water Limitations will be achieved through an iterative process and the application of increasingly more effective BMPs.

C. The Permittees shall comply with Section V.B and VII.A of this Order, through timely implementation of control measures and other actions to reduce Pollutants in Urban Runoff in accordance with the DAMP and other requirements of this Order, including modifications thereto.

D. If exceedances of Water Quality Standards persist notwithstanding implementation of the DAMP and other requirements of this Order, the Permittees shall assure compliance with Sections V.B and VII.A of this Order, by complying with the following procedure:

1. Upon a determination by either the Permittees or the Executive Officer that the discharges from the MS4 are causing or contributing to an exceedance of an applicable Water Quality Standard, the Permittees shall:

   a. Promptly, within two (2) working days, provide oral or e-mail and thereafter submit a report to the Executive Officer that describes the BMPs that are currently being implemented and the additional BMPs that will be implemented to prevent or reduce those Pollutants that are causing or contributing to the exceedance of the applicable Receiving Water Quality Standards.

   b. The report may be incorporated in the annual update to the DAMP, unless the Executive Officer directs an earlier submittal.

   c. The report shall include an implementation schedule.

   d. The Executive Officer may require modifications to the report.

   e. Submit any modifications to the report required by the Executive Officer within 30 days of notification;

2. Within 30 days following approval by the Executive Officer of the report described above, the Permittees shall revise the DAMP, applicable LIPs, and monitoring program to incorporate the approved modified BMPs that have been and will be implemented, the implementation schedule, and any additional monitoring required;

3. Implement the revised DAMP, applicable LIPs and monitoring program in accordance with the approved schedule.

4. If the exceedance is solely due to discharges to the MS4 from activities or areas outside the Permittees jurisdiction or control, the Permittees must, within two (2) working days of becoming aware of the situation, provide oral or e-mail notice to the Executive Officer of the determination of the exceedance and provide written documentation of these discharges to the Executive Officer within ten (10) calendar days of becoming aware of the situation.

5. So long as the Permittees have complied with the procedures set forth above and are implementing the revised LIP, DAMP, and monitoring program, the Permittees do not have to repeat the same procedure for continuing or recurring exceedances of the same Receiving Water Limitation unless the Executive Officer determines it is necessary to develop additional BMPs

6. Nothing in Section VII.D prevents the Regional Board from enforcing any provision of this Order while the Permittee prepares and implements the above report.

VIII. LEGAL AUTHORITY/ENFORCEMENT

A. The Permittees shall maintain adequate legal authority to control the discharge of Pollutants to the MS4 from Urban Runoff and enforce those authorities. This may be accomplished through ordinance, statute, permit, contract or similar means. Such legal authority must address all IC/IDs into the MS4, including those from residential, commercial, industrial and construction sites. The Permittees shall use the enforcement guidelines developed in Section 3.4 and 4.5 of the DAMP or develop their own enforcement program and shall incorporate the enforcement program into their LIP. Such legal authority must also at a minimum include and authorize the Permittees to:

1. Carry out all inspections, surveillance, and monitoring necessary to determine compliance and noncompliance with their ordinances and permits. The Permittee must have authority, to the extent permitted by California and federal Law and subject to the limitations on municipal action under the constitutions of California and the United States, to enter, monitor, inspect, and gather evidence (pictures, videos, samples, documents, etc.) from residential, industrial, commercial, and construction sites discharging into the MS4 within the limits of its statutory authority. The Permittees shall progressively and decisively take enforcement actions against any violators of the Storm Water Ordinance. These enforcement actions must, at minimum, meet the guidelines and procedures listed in Sections 3.4 and 4.5 of the DAMP.

2. Control the contribution of Pollutants to the MS4;

3. Stop Pollutant discharge or threat of discharge if a discharger is unable or unwilling to correct significant non-compliance where there is a serious threat to public health or the environment;

4. Require the use of BMPs to prevent or reduce the discharge of Pollutants into MS4 consistent with the MEP standard.

5. Require documentation on the effectiveness of BMPs implemented to reduce the discharge of Pollutants to the MS4; and

6. The Co-Permittees' Storm Water Ordinances or other local regulatory mechanisms shall include sanctions to ensure compliance. Sanctions shall include but are not limited to: oral and/or written warnings, notice of violation or non-compliance, administrative compliance orders, stop work or cease and desist order, a civil citation or injunction, the imposition of monetary penalties or criminal prosecution (infraction or misdemeanor). These sanctions shall be issued in a decisive manner within a predetermined timeframe, from the time of the violation's occurrence and/or follow-up inspection.

B. The Co-Permittees shall take progressive and decisive enforcement actions against violators of their Storm Water Codes and Ordinances, in accordance with the federal storm water regulations (40CFR, Part 122.26(d)(2)(I)(A-F)), and adopted/established guidelines and procedures as described in Section 3.4 of the DAMP. The Co-Permittees shall consider the time to return to compliance as one measure of effectiveness of their Storm Water Ordinances or enforcement response procedure. The Co-Permittees shall document these actions in their records (including electronic databases as outlined in the DAMP) and Annual Reports. The Co-Permittees shall use their authority to bring dischargers into immediate compliance with enforcement actions.

C. Within three (3) years of adoption of this Order, the Co-Permittees shall promulgate and implement ordinances that would control known pathogen or Bacterial Indicator sources such as animal wastes, if necessary.

D. The Co-Permittees shall continue to provide notification to the Executive Officer of storm water related information obtained during site inspections of construction and industrial sites regulated by the General Storm Water Permits and of sites that should be regulated under the General Storm Water Permits. The notification should include perceived violations of the General Storm Water Permits or local requirements, prior history of violations of the Permittee's Storm Water Ordinance, enforcement actions related to the Storm Water Ordinance taken by the Permittee, and other relevant information. In addition, Sections XVI.B of this Order addresses additional notification requirements for construction, industrial and commercial sites not covered under the General Storm Water Permits. Notification shall not prevent or delay the Co-Permittees from independently taking appropriate actions to bring Construction Sites and Industrial Facilities into compliance with their local ordinances, rules, regulations and WQMP.

E. The Permittees are encouraged to enter into interagency agreements with owners of other MS4, such as CalTrans, school and college districts, universities, Department of Defense, Native American Tribes, etc., to control the contribution of Pollutants into their

MS4 from the non-Permittee MS4. The Regional Board will continue to notify the owner/operator of the MS4 systems and the Permittee if the Board issues a permit for discharges into the MS4.

F. The Co-Permittees shall annually review their Storm Water Ordinances and provide findings within the Annual Report on the effectiveness of these ordinances and enforcement programs in prohibiting the following types of discharges to the MS4 (the Co-Permittees may propose appropriate BMPs in lieu of prohibiting these discharges, where the Co-Permittees are responsible for ensuring that dischargers adequately maintain those BMPs):

1. Sewage, where a Co-Permittee operates the sewage collection system (also prohibited under the Statewide SSO Order[38]);
2. Wash water resulting from the hosing or cleaning of gas stations, auto repair garages, and other types of automobile service stations;
3. Discharges resulting from the cleaning, repair, or maintenance of any type of equipment, machinery, or facility, including motor vehicles, concrete mixing equipment, portable toilet servicing, etc.;
4. Wash water from mobile auto detailing and washing, steam and pressure cleaning, carpet/upholstery cleaning, pool cleaning and other such mobile commercial and industrial activities;
5. Water from cleaning of municipal, industrial, and commercial sites, including parking lots, streets, sidewalks, driveways, patios, plazas, work yards and outdoor eating or drinking areas, etc.;
6. Runoff from material storage areas or uncovered receptacles that contain chemicals, fuels, grease, oil, or other Hazardous Materials[39];
7. Discharges of runoff from the washing of hazardous material from paved or unpaved areas;
8. Discharges of pool or fountain water containing chlorine, biocides, or other chemicals; pool filter backwash containing debris and chlorine;
9. Pet waste, yard waste, litter, debris, sediment, etc.; and,
10. Restaurant or food processing facility wastes such as grease, floor mat and trash bin wash water, food waste, etc.

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[38] State Board WQO No. 2006-0003.
[39] Hazardous material is defined as any substrate that poses a threat to human health or the environment due to its toxicity, corrosiveness, ignitability, explosive nature or chemical reactivity. These also include materials named by EPA to be reported if a designed quantity of the material is spilled into the waters of the United States or emitted into the environment.

G. Within 24 months after Order adoption, each Co-Permittee shall submit a certification statement, signed by its legal counsel, that the Co-Permittee has obtained all necessary legal authority in accordance with 40 CFR 122.26(d)(2)(i) (A-F) and to comply with this Order through adoption of ordinances and/or municipal code modifications. A copy of the certification shall also be placed in the LIP.

H. Annually thereafter, Permittees shall evaluate the effectiveness of implementation and enforcement response procedures with respect to the above items. The findings of these reviews, along with recommended corrective actions, where appropriate, and schedules shall be submitted as part of the Annual Report for the corresponding reporting period. The LIP shall be updated accordingly.

IX. ILLICIT CONNECTIONS/ILLEGAL DISCHARGES (IC/ID); LITTER, DEBRIS AND TRASH CONTROL

A. Consistent with each Co-Permittees statutory authority, the Co-Permittees have adopted Storm Water Ordinances. The Co-Permittees must continue to prohibit IC/IDs to the MS4 through their Storm Water Ordinances and the Principal Permittee must do so through its statutory authority. In addition, the Permittees must continue to implement and improve routine inspection and monitoring and reporting programs for their MS4 facilities. If routine inspections or Dry Season monitoring indicate IC/IDs, they must be investigated and eliminated or permitted within sixty (60) calendar days of receipt of notice by its staff or from a third party.

B. The Permittees upon being put on notice by staff or a third party must immediately (within 24 hours of receipt of notice by its staff or from a third Party) investigate all spills, leaks, and/or other illegal discharges to the MS4. Based upon their assessment and as specified below, the Permittees must provide notifications and reporting as described in Section 4 of the DAMP and Section XVI of this Order.

C. The Permittees shall control Illegal Dumping that may result in a discharge of Pollutants to the MS4 to the MEP. The Permittees shall describe their procedures and authorities for managing Illegal Dumping in their LIP.

D. Within 18 months of adoption of this Order, the Permittees shall review and revise their IC/ID program to include a pro-active IDDE using the Guidance Manual for Illicit Discharge, Detection, and Elimination by the Center for Watershed Protection[40] or any

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[40] USEPA (Illicit Discharge Detection and Elimination - A Guidance Manual for Program Development and Technical Assessments) by the Center for Watershed Protection and Robert Pitt, University of Alabama, October 2004, updated 2005).

other equivalent program consistent with Section IX.E below. The result of this review shall be reported in the Annual Report and include a description of the Permittees' revised pro-active program, procedures and schedules. The LIP shall be updated accordingly.

E. The Permittees' revised IC/ID programs shall specify an IDDE program for each Co-Permittee to individually, or in combination:

   a. Develop an inventory and map of Permittee MS4 facilities and Outfalls to Receiving Waters.

   b. Develop a schedule to be submitted within 18 months to conduct and implement systematic investigations of MS4 open channels and Major Outfalls.

   c. Use field indicators to identify potential Illegal Discharges, if applicable;

   d. Track Illegal Discharges to their sources[41] where feasible; and

   e. Educate the public about Illegal Discharges and Pollution Prevention where problems are found.

F. The Permittees shall continue to integrate IC/ID detection and elimination into their inspection programs, training of Permittee staff, and monitoring data collection and other indicator data.

G. The Permittees shall annually review and evaluate their IC/ID program, including litter/trash BMPs, to determine if the program needs to be adjusted. Findings of the review and evaluation shall be submitted with the Annual Report.

H. The Permittees shall maintain a database summarizing IC/ID incident response (including IC/IDs detected as part of field monitoring activities). This information shall be updated on an ongoing basis and submitted with the Annual Report.

I. The Permittees shall control, consistent with the MEP standard, Illegal Discharges (including the discharge of spills, leaks, or dumping of any materials other than storm water and authorized non-storm water) into the MS4. All reports of Illegal Discharge shall be promptly investigated and reported as specified in Section XVI (Notification Requirements).

J. In the 2004-2005 Annual Report, the Permittees characterized trash, determined its main source(s) and developed and implemented appropriate BMPs to reduce and/or to eliminate the discharge of trash and debris to Waters of the US to the MEP. The BMPs should be continued and their effectiveness must be reported in the Annual Report.

K. Where non-jurisdictional IC/IDs within a Permittees jurisdiction are identified, the Permittees will notify the responsible party and the Executive Officer of the discharge.

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[41] Table 2: Land uses, Generating Sites and Activities that Produce Indirect Discharges from IDDE, A Guidance Manual for Program Development and Technical Assessments, October 2004 CWP.

X. SEWAGE SPILLS, INFILTRATION INTO THE MS4 SYSTEMS FROM LEAKING SANITARY SEWER LINES, SEPTIC SYSTEM FAILURES, AND PORTABLE TOILET DISCHARGES

A. The Permittees shall continue to provide local sanitation districts 24-hour access to the MS4 to address sewage spills. The Permittees shall continue to work cooperatively with the local sewer agencies to determine and control the impact of infiltration from leaking sanitary sewer systems on Urban Runoff quality. Each Permittee shall implement control measures necessary to minimize infiltration of seepage from sanitary sewers to the MS4 through routine preventative maintenance of the MS4.

B. Each Permittee shall continue to cooperate and coordinate with the sewage collection/treatment agencies as described in Appendix I of the DAMP to swiftly respond to and contain sewage spills that may discharge into its MS4. Management and/or preventive measures shall continue to be implemented for sources including portable toilets, failing septic systems, and failing private laterals that may cause or contribute to Urban Runoff Pollution problems in Permittee jurisdictions.

C. Permittees who are regulated under the SSO Order No. 2006-0003-DWQ, shall continue to comply with that Order to control sanitary system overflows.

D. Permittees with septic systems in their jurisdiction shall maintain the inventory of septic systems within its jurisdiction completed in 2008. Updates to the inventory will be maintained by County Environmental Health via a database of new septic systems approved since 2008.

XI. CO-PERMITTEE INSPECTION PROGRAMS

The Permittee inspection programs are outlined in Sections 7 and 8 of the DAMP and describe some of the minimum inspection and enforcement procedures utilizing existing inspection programs, provides criteria for characterizing the significance of violations, criteria for prioritizing violations, appropriate response actions corresponding to the priority of violations and identifies the hierarchy of enforcement/compliance responses. Section 3.4 of the DAMP provides a framework to standardize the implementation and enforcement by the Co-Permittees of their respective Storm Water Ordinances. The Co-Permittees shall continue to enforce their respective Storm Water Ordinances consistent with the DAMP and this Order.

A. GENERAL REQUIREMENTS

1. The Co-Permittees shall continue to maintain and update a database inventory of all active Construction Sites, and Industrial and Commercial Facilities within their jurisdiction consistent with the database requirements of Section 7 and 8 of the DAMP. Construction Sites and Industrial and Commercial Facilities shall be

included in the database inventories regardless of whether the Construction Sites or Commercial and Industrial Facilities are subject to the General Construction Permit or the General Industrial Permit or other individual NPDES permit or WDRs.

2. The Co-Permittee inspection database inventory described in Section XI.A.1 shall be maintained in an electronic database format that may be made available to the Regional Board upon request (e.g. request via phone call, e-mail, letter, etc,). The database inventory must be consistent with the requirements of Sections 7 and 8 of the DAMP. Supporting paper (or electronic) files shall also be maintained and made available upon Regional Board request. Supporting files should include a record of inspection dates, the results of each inspection, photographs (if any), video (if any) and a summary of any enforcement actions taken. The inventory databases shall be updated on an annual basis and an electronic copy shall be provided with each Annual Report.
3. The Co-Permittee shall not issue an occupancy permit to an Industrial Facility or other license authorizing the facility to operate, unless the applicant is informed of the General Industrial Permit and that it may have to secure coverage under the General Industrial Permit. The Co-Permittees shall verify during Industrial Facility inspections whether a site has obtained necessary permit coverage under the General Industrial Permit.
4. If the Industrial Facility's SIC code falls under the mandatory category the Co-Permittee shall notify the Regional Board and the applicant that they may be required to obtain coverage under the General Industrial Permit.
5. Permits for Construction Sites shall not be granted until appropriate coverage under the General Construction Permit (s) is verified.
6. Perceived Non-filers for the General Storm Water Permits shall be reported consistent with Section XVI.E.
7. If a Co-Permittee receives notice by its staff or from a third party of a non-Emergency Situation representing a possible violation of the General Storm Water Permit or other permit issued by the State or Regional Board to an Industrial Facility or Construction Site, the Co-Permittee shall, within two (2) working days, provide oral or e-mail notice to Regional Board staff of the location within its jurisdiction where the incident occurred and describe the nature of the incident. After notifying the Regional Board, no further action is necessary regarding the General Storm Water Permits. However, each Co-Permittee shall take appropriate actions to bring an Industrial Facility or Construction Site into compliance with its Storm Water Ordinances.
8. The Co-Permittees need not inspect facilities already inspected by Regional Board staff if the inspection was conducted within the specified time period. Regional

Board staff inspection information is available at www.ciwqs.ca.gov[42].

9. Each Co-Permittee shall respond to complaints received from third parties regarding Construction Sites and Industrial and Commercial Facilities in a timely manner to ensure that the sites are not a source of Pollutants to the MS4 and the Receiving Waters.

10. The Co-Permittees shall enforce their Storm Water Ordinances and permits at all Construction Sites and Industrial, and Commercial Facilities in a fair, firm and consistent manner. Sanctions for non-compliance as required under Section VIII (Legal Authority/Enforcement) shall be deemed adequate to bring the site into compliance with their Storm Water Ordinances and permits.

11. Each Co-Permittee shall document, evaluate and annually report the effectiveness of its enforcement procedures in achieving prompt and timely compliance with inspection programs. Sanctions for non-compliance shall be adequate to bring the site into compliance and to stop the Pollutant discharge consistent with the requirements of Section VIII of this Order.

12. The Principal Permittee and the County have implemented the CAP. Through the Riverside County Department of Environmental Health, the CAP addresses storm water compliance issues at restaurant facilities and businesses that must have a hazardous material permit for either storing, handling or generating hazardous materials. As described in Section 8 of the DAMP, the Permittees must either participate in the CAP or implement an equivalent inspection program. The cities of Corona and Riverside maintain such programs through their respective POTW pre-treatment programs that may be supplemented by the activities of the Department of Environmental Health during routine inspections. The County is establishing a stand-alone NPDES Storm water Compliance Inspection and Enforcement Program (CIEP) for Industrial and Commercial Facilities in the unincorporated areas of the County.

13. Where inspections and/or enforcement required by this Order are carried out on behalf of the Co-Permittee by other agencies or departments such as the County Department of Environmental Health, county and local fire departments, hazardous materials programs, code enforcement, industrial pretreatment, and building and safety, the Co-Permittee shall monitor and annually evaluate and report adequacy of program coverage and enforcement response in complying with this Order.

14. All inspectors shall be trained in accordance with Section XV.

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[42] To obtain access to the State database, registration at the following link is necessary: http://www.waterboards.ca.gov/water_issues/programs/ciwqs/chc_npdes.shtml. Contact information is available at http://www.waterboards.ca.gov/water_issues/programs/ciwqs/contactus.shtml.

B. CONSTRUCTION SITES

1. Each Co-Permittee shall include in the electronic database identified in Section XI.A.2 an inventory of all Construction Sites within its jurisdiction for which building or grading permits have been issued and activities at the site include: soil movement; uncovered storage of materials or wastes, such as dirt, sand or fertilizer; or exterior mixing of cementaceous products, such as concrete, mortar or stucco.

2. Each Permittee shall continue to prioritize Construction Sites within its jurisdiction as a high, medium or low threat to water quality. Evaluation of construction sites shall be based on factors, which shall include but not be limited to: soil erosion potential, project size, proximity and sensitivity of Receiving Waters and any other relevant factors. At a minimum, high priority Construction Sites shall include: sites disturbing 50 acres and greater; sites disturbing over 1 acre with Direct Discharge to Receiving Waters with CWA Section 303(d) listed waters for sediment or turbidity impairments; site specific characteristics[43] ; and any other relevant factor. At a minimum, medium priority construction sites shall include: sites disturbing between 10 to less than 50 acres of disturbed soil.

3. Each Permittee shall conduct Construction Site inspections for compliance with its ordinances (grading, WQMPs, etc.) and local permits (building, grading, etc.). The Permittees shall develop a checklist for conducting Construction Site inspections. Inspections of Construction Sites shall include, but not be limited to:

   a. Verification of coverage under the General Construction Permit (PRDs or Waste Discharge Identification Number [WDID]) during the initial inspection. As Permittees become aware of changes in ownership, they shall notify Regional Board staff.

   b. Ensure that the BMPs implemented on-site are effective for the appropriate phase of construction (preliminary stage, mass grading stage, streets and utilities stage etc.).

   c. Visual observations for Illegal Discharges, potential Illicit Connections, and potential Pollutant sources.

   d. Implementation and maintenance of BMPs required under local requirements.

   e. An assessment of the effectiveness of BMPs implemented at the site and the need for any additional BMPs.

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[43] The recently adopted General Construction Permit Order No. 2009-0009-DWQ includes risk-based characterization of construction sites based on site-specific conditions.

4. At a minimum, the inspection frequency shall include the following:
   a. During the Wet Season (October 1 through May 31 of each year), all high priority Construction Sites are to be inspected, in their entirety, once a month. All medium priority Construction Sites are to be inspected at least twice during the Wet Season. All low priority Construction Sites are to be inspected at least once during the Wet Season. Construction Sites that disturb less than one acre may be inspected on an as needed basis. When BMPs or BMP maintenance is deemed inadequate or out of compliance, an inspection frequency of at least once per week should be maintained until BMPs and BMP maintenance are brought into compliance.
   b. During the Dry Season (June 1 through September 30 of each year), all Construction Sites shall be inspected at a frequency sufficient to ensure that sediment and other Pollutants are properly controlled and that unauthorized, Non-storm Water discharges are prevented.

C. INDUSTRIAL FACILITIES

1. To establish priorities for inspection, the Permittees shall continue to prioritize Industrial Facilities within their jurisdiction as a high, medium, or low threat to water quality. Continual evaluation of these Industrial Facilities should be based on such factors as type of industrial activities (i.e., SIC codes), materials or wastes used or stored outside, Pollutant discharge potential, compliance history, facility size, proximity and sensitivity of Receiving Waters and any other relevant factors described in Section 8 of the DAMP. At a minimum, a high priority shall be assigned to: Industrial Facilities subject to section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA); Industrial Facilities that handle or generate Pollutants for which the receiving water is impaired, facilities that have a significant potential to release pre-production plastics or nurdles into the environment, and Industrial Facilities with a high potential for or history of unauthorized, Non-storm Water discharges.
2. Each Co-Permittee shall conduct Industrial Facility inspections for compliance with its ordinances, permits and this Order. Industrial Facility inspections shall be consistent with Section 8 of the DAMP. If an inspection indicates the need for follow-up, Co-Permittee follow-up inspections shall include a review of the Industrial Facility's material and waste handling and storage practices, written documentation of Pollutant control BMP implementation and maintenance procedures, digital photographic documentation of water quality violations as well as evidence of past or present unauthorized, Non-storm Water discharges and enforcement actions issued at the time of the Co-Permittee inspection. Report of inspections shall be included in the Annual Report and shall provide the basis for downgrading or upgrading priority ranking of Industrial Facilities.

3. All high priority Industrial Facilities are to be inspected at least once a year; all medium priority Industrial Facilities are to be inspected at least once every two years; and all low priority Industrial Facilities are to be inspected at least once during the term of this Order. In the event that inappropriate material or waste handling or storage practices are observed, or unauthorized, non-storm water discharges are observed, an enforcement order shall be issued and a re-inspection frequency adequate to bring the Industrial Facility into compliance must be maintained (at a minimum, once a month or within the compliance schedule prescribed by the Co-Permittee in a written notice to the discharger). Once compliance is achieved, a minimum inspection frequency of once every six months should be maintained for the annual reporting period.
4. Each Co-Permittee shall continually identify undocumented Industrial Facilities within its jurisdiction and shall add them to the database, as identified in Section XI.A.2. Additionally, each Industrial Facility shall be listed as per the criteria in specified in Section XI.C.1 within 15 days from the initial date of discovery of the Industrial Facility.
5. Each Permittee shall require Industrial Facilities to implement source control and pollution prevention measures consistent with the requirements of Section 8.of the DAMP.

D. COMMERCIAL FACILITIES

1. Each Permittee shall continue to implement the CAP or equivalent, pursuant to Section 8. of the DAMP and Section XI.A.9 (complaints) of this Order; Section 8 shall be modified to clarify the types of facilities specifically addressed by the CAP. Within 18 months, the Co-Permittees shall also identify any facilities that transport, store or transfer pre-production plastic pellets and managed turf facilities (e.g. private golf courses, athletic fields, cemeteries, and private parks) within their jurisdiction and determine if these facilities warrant additional inspection to protect water quality.
2. The Permittees shall continue to develop BMPs applicable for each of the Commercial Facilities described in Section 8 of the DAMP.
3. The Co-Permittees shall continue to prioritize Commercial Facilities within their jurisdiction as a high, medium, or low threat to water quality based on such factors as the type, magnitude, and location of the commercial activity, proximity and sensitivity of Receiving Waters, potential for discharge of Pollutants to the MS4, Commercial Facilities that handle or generate Pollutants for which the Receiving Water is Impaired, frequency of inspections and facilities with a high potential for or history of unauthorized, Non-storm Water discharges.
4. All high priority Commercial Facilities shall be inspected at least once per year; all medium priority Commercial Facilities shall be inspected at least every two years; and all low priority Commercial Facilities shall be inspected at least once during the

term of this Order. At a minimum, each Commercial Facility shall be required to implement source control and pollution prevention BMPs consistent with the requirements of Section 8 of the DAMP. Co-Permittee follow-up inspections should include a review of BMPs implemented, their effectiveness and maintenance; written and photographic documentation of materials and waste handling and storage practices; evidence of past or present unauthorized, Non-storm Water discharges; and an assessment of management/employees awareness of storm water pollution prevention measures.

5. In the event that inappropriate material or waste handling or storage practices are observed, or there is evidence of past or present unauthorized, Non-storm Water discharges, a written enforcement order shall be issued at the time of the initial inspection for CAP equivalent inspection programs or at the time of the CAP follow-up inspection, to bring the Commercial Facility into compliance.
6. Within 18 months of adoption of this Order, the Co-Permittee shall notify all mobile businesses based within their jurisdiction concerning the minimum Source Control and Pollution Prevention BMPs that they must develop and implement. For purposes of this Order, mobile businesses include: mobile auto washing/detailing; equipment washing/cleaning; carpet, drape, furniture cleaning; and mobile high pressure or steam cleaning activities that are based out of a Co-Permittee's jurisdiction. The mobile businesses shall be required to implement appropriate BMPs within 3 months of being notified by the Co-Permittees. The Co-Permittees shall also notify mobile businesses discovered operating within their jurisdiction.
7. Within 24 months of adoption of this Order, the Co-Permittees shall develop an enforcement strategy to address mobile businesses.
8. The Co-Permittees should continue to maintain the CAP restaurant inspection program, or equivalent. Inspections for Commercial Facilities with restaurants shall, at a minimum, address:
    a. Oil and grease disposal to verify that these wastes are not poured onto a parking lots, streets or adjacent catch basins;
    b. Trash bin areas, to verify that these areas are clean, the bin lids are closed, the bins are not used for liquid waste disposal and wash water from the bins is not disposed of into the MS4;
    c. Parking lot, alley, sidewalk and street areas to verify that floor mats, filters and garbage containers are not washed in those areas and that no wash water is disposed of in those areas;
    d. Parking lot areas to verify that they are cleaned by sweeping, not by hosing down, and that the facility operator uses dry methods for spill cleanup; and,
    e. Violations of the Storm Water Ordinance shall be enforced by the jurisdictional Co-Permittee.

E. RESIDENTIAL PROGRAM

1. Within 18 months of adoption of this Order, each Co-Permittee shall develop and implement a residential program consistent with these requirements to reduce the discharge of Pollutants from residential activities to the MS4, consistent with the MEP standard.
2. The Co-Permittees shall identify residential activities that are potential sources of Pollutants and develop and/or enhance Fact Sheets/BMPs as appropriate. At a minimum, this should include: residential auto washing and maintenance activities; use and disposal of pesticides, herbicides, fertilizers and household cleaners; and collection and disposal of pet wastes. The Permittees shall distribute the Fact Sheets/BMPs and appropriate information from organizations such as the Riverside-Corona Resource Conservation District[44] and USDA's Backyard Conservation Program[45] to the residents to ensure that discharges from the residential areas are not causing or contributing to a violation of Water Quality Standards in the Receiving Waters.
3. The Co-Permittees, collectively or individually, shall facilitate the proper collection and management of used oil, toxic and hazardous materials, and other household wastes. The Permittees should continue distribution of information regarding the dates and locations of temporary and permanent household hazardous waste and antifreeze, oil, battery and paint collection events and facilities, and financial support of household hazardous waste and antifreeze, oil, battery and paint collection facilities and events or curbside or special collection sites managed by the Co-Permittees or private entities, such as solid waste haulers.
4. The Regional Board recommends continuation of Co-Permittee efforts to coordinate with local water purveyors and other stakeholders to encourage efficient irrigation and minimize runoff from residential areas.
5. The Co-Permittees shall enforce their Storm Water Ordinance as appropriate to control the discharge of Pollutants associated with residential activities.
6. Each Co-Permittee shall include an evaluation of its residential program in the Annual Report starting with the second Annual Report after adoption of this Order.

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[44] The Riverside-Corona Resource Conservation District (RCRCD) provides gardening and horticulture information appropriate for the area including native plant selection, backyard management, alternatives to pesticide, irrigation scheduling and composting. The RCRCD is sponsored by the cities and county of Riverside Only Rain Down the Storm Drain Pollution Prevention Program.

[45] Backyard Conservation, Bringing Conservation from the Countryside to Your Backyard, USDA Natural Resources Conservation Service, National Association of Conservation Districts, Wildlife Habitat Council and National Audubon Society.

XII. NEW DEVELOPMENT (INCLUDING SIGNIFICANT REDEVELOPMENT)

A. GENERAL REQUIREMENTS:

1. Each Co-Permittee, consistent with the DAMP, and requirements of this Order, when considering any map or permit for a New Development or Significant Redevelopment project for which discretionary approval is sought, must continue to require such map or permit to obtain coverage under the General Construction Permit, where applicable, prior to the issuance of grading or construction permits. Each Co-Permittee shall specify its verification procedure and any tools utilized for this purpose in its LIP.

2. Each Co-Permittee must continue to implement those BMPs identified in Section 7.1 of the DAMP. Each Permittee shall ensure that the erosion and sediment control plans it approves include appropriate erosion and sediment control BMPs (i.e., erosion measures for slopes greater than a certain length or hill-side developments, ingress/egress controls, perimeter controls, run-on diversion, if significant) such that a distinct and effective combination of BMPs consistent with site risk is implemented through all phases of construction.

3. The land use approval process of each Co-Permittee must continue to require post-construction BMPs, Source Control BMPs and Treatment Control BMPs and identify their locations and long-term maintenance responsibilities consistent with the requirements of this Order.

4. Each Permittee shall ensure, consistent with the MEP standard and within the limits of its legal authority, that runoff from New Development and Significant Redevelopment projects not regulated under this Order but that require encroachment permits for connections to the MS4 regulated under this Order are consistent with the requirements of this Order including the model WQMP for the Permit Area.
5. Each Permittee shall ensure that appropriate BMPs to reduce erosion and mitigate Hydromodification are included in the design for replacement of existing culverts or construction of new culverts and/or bridge crossings to the MEP[46].
6. Each Permittee shall ensure, consistent with the MEP standard, that runoff from development projects it approves, does not cause nuisance to adjoining downstream properties and stream channels.
7. Each Permittee shall ensure to the MEP that MS4s[47] are appropriately maintained consistent with Section XIV of this Order or are adequately maintained by a legally responsible party.

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[46] This type of project may require a CWA Section 404 Permit.

8. Each Permittee shall require applicants to minimize the short and long-term adverse impacts on Receiving Water quality from New Development and Significant Redevelopment maps or permits where discretionary approval is sought, as required in Section XII.D below, by: (1) continuing to review, approve, and verify implementation of project-specific WQMPs, implementation of LID principles, where feasible; (2) addressing HCOCs; and (3) ensuring that long term BMP operation and maintenance mechanisms are in place prior to project closure or issuance of certificates of occupancy.

9. The requirements of Section XII.D below shall apply to Permittee projects that meet the New Development and Significant Redevelopment criteria.

10. Each Permittee shall participate in the development of a Watershed Action Plan, described in Section XII.B, below, to integrate water quality, stream protection and storm water management and use within the Permit Area with land use planning policies, ordinances, and plans.

B. WATERSHED ACTION PLAN

1. An integrated watershed management approach may facilitate integration of planning and project approval processes with water quality and quantity control measures. Management of the impacts of Permit Area urbanization on water quality and stream stability is more effectively done on a per-site, neighborhood and municipal basis based on an overall watershed plan. Pending completion of the Watershed Action Plan consistent with this section, management of the impacts of urbanization shall be accomplished using existing programs. The Permittees shall develop a Watershed Action Plan to address the entire Permit Area. The Permittees may choose to develop sub-watershed action plans based on the overall Watershed Action Plan in the future based on new 303(d) impairments, TMDL requirements, or other factors.

2. The Permittees shall develop and submit to the Executive Officer for approval a Watershed Action Plan that describes and implements the Permittees' approach to coordinated watershed management. The objective of the Watershed Action Plan is to address watershed scale water quality impacts of urbanization in the Permit Area associated with Urban TMDL WLAs, stream system vulnerability to Hydromodification from Urban Runoff, cumulative impacts of development on

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[47] Urban runoff conveyance systems created or resulting from development projects approved by Permittees.

vulnerable streams, preservation of Beneficial Uses of streams in the Permit Area, and protection of water resources, including groundwater recharge areas.

3. Within three years of Permit adoption, the Co-Permittees shall develop the Watershed Action Plan and implementation tools to address impacts of urbanization in a holistic manner. At a minimum, the Watershed Action Plan shall include the following:
   a. Describe proposed Regional BMP approaches that will be used to address Urban TMDL WLAs.
   b. Develop recommendations for specific retrofit studies of MS4, parks and recreational areas that incorporate opportunities for addressing TMDL Implementation Plans, Hydromodification from Urban Runoff and LID implementation.
   c. Description of regional efforts that benefit water quality (e.g. Western Riverside County Multiple Species Habitat Conservation Plan, TMDL Task Forces, Water Conservation Task Forces, Integrated Regional Watershed Management Plans) and their role in the Watershed Action Plan. The Permittees shall describe how these efforts link to their Urban Runoff Programs and identify any further coordination that should be promoted to address Urban WLA or Hydromodification from Urban Runoff to the MEP.
4. Within two years of adoption of this Order, the Permittees shall delineate existing unarmored or soft-armored stream channels in the Permit Area that are vulnerable to Hydromodification from New Development and Significant Redevelopment projects.
5. Within two years of completion of the delineation in Section XII,B.4 above, develop a Hydromodification management plan (HMP) describing how the delineation will be used on a per project, sub-watershed, and watershed basis to manage Hydromodification caused by urban runoff. The HMP shall prioritize actions based on drainage feature/susceptibility/risk assessments and opportunities for restoration.
   a. The HMP shall identify potential causes of identified stream degradation including a consideration of sediment yield and balance on a watershed or sub-watershed basis.
   b. Develop and implement a HMP to evaluate Hydromodification impacts for the drainage channels deemed most susceptible to degradation. The HMP will identify sites to be monitored, include an assessment methodology, and required follow-up actions based on monitoring results. Where applicable, monitoring sites may be used to evaluate the effectiveness of BMPs in preventing or reducing impacts from Hydromodification.

6. Identify Impaired Waters [CWA § 303(d) listed] with identified Urban Runoff Pollutant sources causing impairment, existing monitoring programs addressing those Pollutants, any BMPs that the Permittees are currently implementing, and any BMPs the Permittees are proposing to implement consistent with the other requirements of this Order. Upon completion of XII.B.4, develop a schedule to implement an integrated, world-wide-web available, regional geodatabase of the impaired waters [CWA § 303(d) listed], MS4 facilities, critical habitat preserves defined in the Multiple Species Habitat Conservation Plan and stream channels in the Permit Area that are vulnerable to Hydromodification from Urban Runoff.

7. Develop a schedule to maintain the geodatabase required in Section XII.B.4 and other available and relevant regulatory and technical documents associated with the Watershed Action Plan.

8. Within three years of adoption of this Order, the Watershed Action Plan shall be submitted to the Executive Officer for approval and incorporation into the DAMP. Within six months of approval, each Permittee shall implement applicable provisions of the approved revised DAMP and incorporate applicable provisions of the revised DAMP into the LIPs for watershed wide coordination of the Watershed Action Plan.

9. The Permittees shall also incorporate Watershed Action Plan training, as appropriate, including training for upper-level managers and directors into the training programs described in Section XV. The Co-Permittees shall also provide outreach and education to the development community regarding the availability and function of appropriate web-enabled components of the Watershed Action Plan.

10. Invite participation and comments from resource conservation districts, water and utility agencies, state and federal agencies, non-governmental agencies and other interested parties in the development and use of the Watershed Geodatabase;

C. INCORPORATION OF WATERSHED PROTECTION PRINCIPLES INTO PLANNING PROCESSES

1. Within 24 months of adoption of this Order, each Co-Permittee shall review its General Plan and related documents including, but not limited to its development standards, zoning codes, conditions of approval and development project guidance to eliminate any barriers to implementation of the LID principles and HCOC discussed in Section XII.E of this Order. The results of this review along with any proposed action plans and schedules shall be reported in the Annual Report for the corresponding reporting year. Any changes to the project approval process or procedures shall be reflected in the LIP.

2. The Co-Permittees shall continue to ensure that their General Plan and related land use ordinances and land use approval processes (including, but not limited to, its approved development standards, zoning ordinances, standard conditions of approval, or project development guidelines) ensure the principles and policies enumerated below are properly considered and are incorporated, as appropriate, into the land use approval process to the MEP:

   a. Limit disturbance of natural water bodies and drainage systems; conserve natural areas; protect slopes and channels; minimize significant adverse impacts from Urban Runoff on the biological integrity of natural drainage systems and water bodies;

   b. Minimize changes in hydrology and Pollutant loading; require incorporation of controls including Source Control and Treatment Control BMPs to mitigate any projected increases in Pollutant loads and flows; ensure that post-development runoff rates and velocities from a site do not adversely impact downstream erosion and stream habitat; minimize the quantity of Urban Runoff directed to impermeable surfaces and the MS4; and maximize the percentage of permeable surfaces to allow more percolation of Urban Runoff into the ground;

   c. Preserve wetlands, riparian corridors, and buffer zones that provide important water quality benefits; establish reasonable limits on the clearing of vegetation from the project site;

   d. Encourage the use of BMPs to manage Urban Runoff quantity and quality, consistent with XII.C.1 above;

   e. Provide for appropriate permanent measures to reduce Pollutant loads in Urban Runoff from the development site; and

   f. Establish development guidelines for areas particularly susceptible to erosion and sediment loss.

3. The Co-Permittees, when acting as a CEQA Lead Agency for a project requiring a CEQA document, must identify at the earliest possible time in the CEQA process resources under the jurisdiction by law of the Regional Board which may be affected by the project. The preliminary WQMP should identify the need for any CWA Section 401 certification. The Co-Permitees should coordinate project review with Regional Board staff pursuant to the requirements of CEQA. Upon request by Regional Board staff, this coordination shall include the timely provision of the discharger's identity and their contact information and the facilitation of early-consultation meetings.

4. The following potential impacts shall be considered during CEQA review:

   a. Potential impact of project construction on Urban Runoff.

   b. Potential impact of project's post-construction activity on Urban Runoff.

c. Potential for discharge of Pollutants from areas of material storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas or loading docks, or other outdoor areas.

d. Potential for discharge of Urban Runoff to affect Beneficial Uses of the Receiving Waters.

e. Potential for significant changes in the flow velocity and/or volume of Urban Runoff that could cause environmental harm.

f. Potential for significant increases in erosion of the project site or surrounding areas.

5. Each Permittee shall provide the Regional Board with the draft amendment or revision when a pertinent General Plan element or the General Plan is noticed for comment in accordance with Govt. Code § 65350 et seq.

D. WATER QUALITY MANAGEMENT PLAN (WQMP) FOR URBAN RUNOFF (FOR NEW DEVELOPMENT/ SIGNIFICANT REDEVELOPMENT):

1. Each Permittee shall continue to require project-specific WQMPs for those maps and permits described below for which discretionary approval is sought and as further described in Section 6 and Appendix O of the DAMP. Within 18 months of adoption of this Order, the Permittees shall submit a revised WQMP to incorporate new elements required in this Order. The primary objective of the WQMP, by addressing Site Design, Source Control and Treatment Control BMPs applied on a regional, sub-regional or site specific basis, is to ensure that the land use approval process of each Co-Permittee will minimize Pollutant loads in Urban Runoff from maps or permits for which discretionary approval is given.
2. Each Co-Permittee shall ensure that an appropriate WQMP is prepared for the following categories of New Development and Significant Redevelopment projects for which a map or permit for discretionary approval is sought:

   a. *All significant re-development projects:* Significant re-development is defined as the addition or replacement of 5,000 or more square feet of impervious surface on an already developed site. Significant Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, original purpose of the facility, or emergency redevelopment activity required to protect public health and safety. Where redevelopment results in an increase of less than fifty percent of the impervious surfaces of a previously existing developed site, and the existing development was not subject to WQMP requirements, the numeric sizing criteria discussed below applies only to the addition or replacement, and not to the entire developed site.

Where redevelopment results in an increase of fifty percent or more of the impervious surfaces of a previously existing developed site, the numeric sizing criteria applies to the entire development.

b. For purposes of this Order, the categories of development identified below, shall be collectively referred to as "New Development".

   i. New developments that create 10,000 square feet or more of impervious surface (collectively over the entire project site) including commercial and industrial projects and residential housing subdivisions requiring a Final Map. (i.e., detached single family home subdivisions, multi-family attached subdivisions, condominiums, apartments, etc.); mixed use and public projects (excluding Permittee road projects). This category includes development projects on public and private land, which fall under the planning and building authority of the Co-Permittees.

   ii. Automotive repair shops (with SIC codes 5013, 5014, 5541, 7532-7534, 7536-7539).

   iii. Restaurants (with SIC code 5812) where the land area of development is 5,000 square feet or more.

   iv. Hillside developments disturbing 5,000 square feet or more which are located on areas with known erosive soil conditions or where the natural slope is twenty-five percent or more.

   v. Developments of 2,500 square feet of impervious surface or more adjacent to (within 200 feet) or discharging directly into ESAs.

   vi. Parking lots of 5,000 square feet or more exposed to storm water. Parking lot is defined as land area or facility for the temporary parking or storage of motor vehicles.

   vii. Retail Gasoline Outlets (RGOs) that are either 5,000 square feet or more with a projected average daily traffic of 100 or more vehicles per day.

   viii. Emergency public safety projects in any of the above-listed categories may be excluded if the delay caused due the requirement for a WQMP compromises public safety, public health and/or environmental protection.

3. WQMPs shall include BMPs (on-site and/or watershed-based), for the discharge of any urban sourced 303(d) listed Pollutant to an Impaired Waterbody on the 303(d) list such that the discharge shall not cause or contribute to an exceedance of Receiving Water Quality Objectives.

4. Treatment Control BMPs shall be in accordance with the approved WQMP and must be sized to comply with one of the following numeric sizing criteria:

a. VOLUME - Volume–based Treatment Control BMPs shall be designed to infiltrate, filter, or treat either:

   i. The volume of runoff produced from a 24-hour, 85th percentile storm event, as determined from the County of Riverside's 85th Percentile Precipitation Isopluvial Map; or,

   ii. The volume of annual runoff produced by the 85th percentile, 24-hour rainfall event determined as the maximized capture storm water volume for the area, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87 (1998); or,

   iii. The volume of annual runoff based on unit basin storage volume, to achieve 80% or more volume treatment by the method recommended in California Storm Water Best Management Practices Handbook – Industrial/Commercial (1993); or,

   iv. The volume of runoff, as determined from the local historical rainfall record, that achieves approximately the same reduction in Pollutant loads and flows as achieved by mitigation of the 85th percentile, 24-hour runoff event;

   OR

b. FLOW - Flow-based BMPs shall be designed to infiltrate, filter, or treat either:

   i. The maximum flow rate of runoff produced from a rainfall intensity of 0.2 inch of rainfall per hour; or,

   ii. The maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity, as determined from the local historical rainfall record, multiplied by a factor of two; or,

   iii. The maximum flow rate of runoff, as determined from the local historical rainfall record that achieves approximately the same reduction in Pollutant loads and flows as achieved by mitigation of the 85th percentile hourly rainfall intensity multiplied by a factor of two.

5. Within 24 months of adoption of this Order, the Permittees shall develop a procedure for streamlining regulatory agency approval of regional Treatment Control BMPs. The recommendations should include information needed to be submitted to Regional Board for consideration of regional Treatment Control BMPs. At a minimum, it should include: BMP location; type and effectiveness in removing Pollutants of Concern; projects tributary to the regional treatment system; engineering design details; funding sources for construction, operation and maintenance; and parties responsible for monitoring effectiveness, operation and maintenance.

6. The Permittees shall continue to require other development projects for which a map or permit for discretionary approval is sought (projects that are not New Developments or Significant Re-developments required to develop project-specific

WQMPs) to incorporate conditions of approval, to require appropriate Site Design, Source Control and any other BMPs which may or may not include Treatment Control BMPs.

7. The Permittees shall ensure that the revised WQMP addresses:
   a. A review and update of Source Control BMPs required for New Development and Significant Redevelopment.
   b. Update of the list of Treatment Control BMPs, including an evaluation of their effectiveness based on national, statewide or regional studies.
8. Groundwater Protection:

   Treatment Control BMPs utilizing infiltration [exclusive of incidental infiltration and BMPs not designed to primarily function as infiltration devices (such as grassy swales, detention basins, vegetated buffer strips, constructed wetlands, etc.)] must comply with the following minimum requirements to protect groundwater:

   a. Use of structural infiltration Treatment Control BMPs shall not cause or contribute to an exceedance of groundwater Water Quality Objectives.
   b. Use of structural infiltration Treatment Control BMPs shall not cause a Nuisance or pollution as defined in Water Code Section 13050.
   c. Use of structural infiltration Treatment Control BMPs shall not be used in areas of known soil or groundwater contamination[48], without written authorization from the Regional Board Executive Officer.
   d. Located at least 100 feet horizontally from any water supply well.
   e. The vertical distance from the bottom of any infiltration structural Treatment Control BMP to the historic high groundwater mark shall be at least 10 feet. Where the groundwater basins do not support Beneficial Uses, this vertical distance criteria may be reduced, provided groundwater quality is maintained.
   f. Source Control and Pollution Prevention BMPs shall be implemented to protect groundwater quality.
   g. Adequate pretreatment of runoff prior to infiltration shall be required in gas stations and large commercial parking lots.
   h. Unless adequate pre-treatment of runoff is provided prior to infiltration, structural infiltration Treatment Control BMPs must not be used for areas of industrial or light industrial activity, such as: areas subject to high vehicular traffic (25,000 or more daily traffic), car washes; nurseries; or any other high threat to water quality land uses or activities.

[48] Extra diligence should also be performed when proposing infiltration BMPs in areas where the proposed land use is often associated with soil and groundwater contamination.

i. Class V injection wells or dry wells must not be placed in areas subject to vehicular[49] repair or maintenance activities[50], such as an auto body repair shop, automotive repair shop, new and used car dealership, specialty repair shop (e.g., transmission and muffler repair shop), or any facility that does any vehicular repair work.

E. LOW IMPACT DEVELOPMENT (LID) AND HYDROMODIFICATION MANAGEMENT TO MINIMIZE IMPACTS FROM NEW DEVELOPMENT/SIGNIFICANT REDEVELOPMENT PROJECTS:

1. Within 18 months of adoption of this Order, the Permittees shall update the WQMP to address LID principles and HCOC consistent with the MEP standard. A copy of the updated WQMP shall be submitted to the Executive Officer for approval. Within six months of approval, each Permittee shall implement the updated WQMP. Onsite LID principles as close to Pollution sources as possible shall be given preference, however, project site, sub-regional or regional LID principles may also be applied.

2. The Permittees shall require those projects identified in Section XII.D.2. to infiltrate, harvest and use, evapotranspire and/or bio-treat[51] the 85th percentile storm event ("Design Capture Volume"). The Design Capture Volume should be calculated as specified in Section XII.D.4.a, above. It is recognized that LID principles are not universally applicable and they are dependent on factors such as: soil conditions including soil compaction and permeability, groundwater levels, soil contaminants (Brownfield development), space restrictions (in-fill projects, redevelopment projects, high density development, transit-oriented developments), highest and best use of Urban Runoff (to support downstream uses), etc. Any portion of this volume that is not infiltrated, harvested and used, evapotranspired, and/or bio-treated shall be treated and discharged in accordance with the requirements set forth in Section XII.G, below.

3. The Permittees shall incorporate LID site design principles into the revised WQMP to reduce runoff to a level consistent with the MEP standard. The Co-Permittees

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[49] Vehicles include automobiles; motor vehicles include trucks, trains, boats, motor cycles, farm machineries, airplanes, and recreation vehicles such as snow mobiles, all terrain vehicles, and jet skis.

[50] United States Environmental Protection Agency, Office of Water, EPA 816-R-00-008, September 2000 *State Implementation Guidance - Revisions to the UIC Regulations for Class V Injection Wells and* "Class V Rule" (*Revisions to the Underground Injection Control Regulations for Class V Injection Wells*, 64 FR 68546) *indicate that these activities are prohibited from Class V injection wells.*

[51] A properly engineered and maintained bio-treatment system may be considered only if infiltration, harvesting and use and evapotranspiration cannot be feasibly implemented at a project site (feasibility criteria will be established in the WQMP [Section XII.G.1]. Specific design, operation and maintenance criteria for bio-treatment systems shall be part of the WQMP that will be produced by the Permittees.

shall require that New Development and Significant Redevelopment projects include Site Design BMPs during the development of the project-specific WQMP. The design goal shall be to maintain or replicate the pre-development hydrologic regime through the use of design techniques that create a functionally equivalent post-development hydrologic regime through site preservation techniques and the use of integrated and distributed infiltration, retention, detention, evapotranspiration, filtration and treatment systems. The revised WQMP should continue to consider Site Design BMPs described in Appendix O of the DAMP and LID principles described in the pending Southern California Stormwater Monitoring Coalition/CASQA *LID Guidance Manual for Southern California*.

4. Within 18 months of adoption of this Order, each Permittee shall revise, where feasible its ordinances, codes, building and landscape design standards to promote green infrastructure/LID techniques including, but not limited to, the following:

   a. Landscaping designs that promote longer water retention and evapotranspiration such as 1 foot depth of compost/top soil in commercial and residential areas on top of 1 foot of non-compacted subsoil, concave landscape grading to allow runoff from impervious surfaces, and water conservation by selection of water efficient native plants, weather-based irrigation controllers, etc.

   b. Allow permeable surface designs in low traffic roads and parking lots. This may require land use/building code amendment.

   c. Allow natural drainage systems for street construction and catchments (with no drainage pipes) and allow vegetated ditches and swales where feasible.

   d. Require landscape in parking lots to provide treatment, retention or infiltration.

   e. Reduce curb requirements where adequate drainage, conveyance, treatment and storage are available.

   f. Amend land use/building codes to allow no curbs, curb cuts and/or stop blocks in parking areas and residential streets with low traffic.

   g. Use of green roof, rain garden, and other green infrastructure in urban/suburban area.

   h. Allow rainwater harvesting and use.

   i. Narrow streets provide alternatives to minimum parking requirements, etc. to facilitate LID where acceptable to public safety departments.

j. Consider vegetated landscape for storm water treatment as an integral element of streets, parking lots, playground and buildings.

k. Consider and facilitate application of landform grading techniques[52] and revegetation as an alternative to traditional approaches, particularly in areas susceptible to erosion and sediment loss such as hillside development projects,

l. Other site design BMPs identified in the WQMP not included above.

5. Consistent with the requirements of AB 1881, each Co-Permittee is mandated to update its landscape ordinance. The bill requires the local agencies to adopt the State Model Water Efficient Landscape Ordinance[53] or prepare one that is "at least as effective" as the State Model by January 2010. The proposed state model ordinance applies to landscape requiring a building or landscape permit, plan check or design review. Each Permittee shall provide the Regional Board a copy of its report to Department of Water Resources (DWR).

6. Each Permittee shall implement effective education programs to educate property owners to use Pollution Prevention BMPs and to maintain on-site hydrologically functional landscape controls.

7. To reduce Pollutants in Urban Runoff, address Hydromodification, and manage Urban Runoff as a resource to the MEP, the revised WQMP shall specify preferential use of Site Design BMPs that incorporate LID techniques, where feasible, in the following manner (from highest to the lowest priority):

   a. Preventative measures (these are mostly non-structural measures, e.g., preservation of natural features to a level consistent with the MEP standard; minimization of Urban Runoff through clustering, reducing impervious areas, etc.) and

   b. Mitigation measures (these are structural measures, such as, infiltration, harvesting and use, bio-treatment, etc.).

8. The mitigation or structural Site Design BMPs shall also be prioritized (from highest to lowest priority):

   a. Infiltration BMPs (examples include permeable pavement with infiltration beds, dry wells, infiltration trenches, surface and sub-surface infiltration basins. The Permittees should work with local groundwater management agencies to ensure that infiltration Treatment Control BMPs are designed appropriately;

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[52] http://www.epa.gov/Region3/mtntop/pdf/appendices/d/aquatic-ecosystem-enhanc-symp/symposiumfinal.pdf

[53] http://www.owue.water.ca.gov/docs/final_reg_text.pdf

b. BMPs that harvest and use (e.g., cisterns and rain barrels); and

c. Vegetated BMPs that promote infiltration and evapotranspiration including bioretention, biofiltration and bio-treatment. Upon the Permittees' determination of LID infeasibility per Section XII.G, design capture volume specified in Section XII.D.4, that is not addressed by onsite or offsite LID *Site Design BMPs* as listed above shall be treated using *Treatment Control BMPs* as described in Section XII.G.

9. Hydrologic Condition of Concern (HCOC):

a. The Permittees shall continue to ensure, consistent with the MEP standard, through their review and approval of project-specific WQMPs that New Development and Significant Redevelopment projects do not pose a HCOC due to increased runoff volumes and velocities.

b. A New Development and Significant Redevelopment project does not cause a HCOC if any one of the following conditions is met:

i) The project disturbs less than one acre and is not part of a common plan of development.

ii) The volume and the time of concentration[54] of storm water runoff for the post-development condition is not significantly different from pre-development condition for a 2-year return frequency storms (a difference of 5% or less is considered insignificant). This may be achieved through Site Design and Treatment Control BMPs.

iii) All downstream conveyance channels to an adequate sump (e.g. Prado Dam, Lake Elsinore, Canyon Lake, Santa Ana River or other lake, reservoir or natural resistant feature) that will receive runoff from the project are engineered and regularly maintained to ensure design flow capacity, and no sensitive stream habitat areas will be affected; or not identified in the Permittees Hydromodification sensitivity maps required in Section XII.B.3, and no sensitive stream habitat areas will be affected.

iv) The Permittees may request a variance from these criteria based on studies conducted by the Southern California SMC, SCCWRP, CASQA, or other regional studies. Requests for consideration of any variances should be submitted to the Executive Officer.

c. If a HCOC exists, the WQMP shall include an evaluation of whether the project will adversely impact downstream erosion, sedimentation or stream habitat. This evaluation should include consideration of pre- and post-development hydrograph volumes, time of concentration and peak discharge velocities for a

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[54] Time of concentration is defined as the time after the beginning of rainfall when all portions of the drainage basin are contributing simultaneously to flow at the outlet.

2-year storm event, construction of sediment budgets, and a sediment transport analysis. If the evaluation determines adverse impacts are likely to occur, the project proponent shall implement additional Site Design BMPs, on-site BMPs, Treatment Control BMPs and/or in-stream BMPs[55] to mitigate the impacts. The project proponent should first consider Site Design BMPs and on-site BMPs prior to proposing in-stream BMPs; in-stream BMPs must not adversely impact Beneficial Uses or result in sustained degradation of Receiving Water quality and shall require all necessary regulatory approvals[56]:

d. HCOC are considered mitigated if they meet one of the following conditions:

   i. Require additional onsite or offsite mitigation to address potential erosion or habitat impact using LID BMPs.

   ii. The project is developed consistent with an approved Watershed Action Plan that addresses HCOC for the downstream Receiving Waters.

   iii. Mimicking the pre-development hydrograph with the post-development hydrograph, for a 2-year return frequency storm. Generally, the hydrologic conditions of concern are not significant, if the post-development hydrograph is no more than 10% greater than pre-development hydrograph. In cases where excess volume cannot be infiltrated or captured and reused, discharge from the site must be limited to a flow rate no greater than 110% of the pre-development 2-year peak flow.

e. If site conditions do not permit items i, through iv, above, the alternatives and in-lieu programs discussed under Section XII.G, below, may be considered.

F. ROAD PROJECTS

1. Within 24 months of adoption of this Order, the Co-Permittees shall develop standard design and post-development BMP guidance to be incorporated into projects for streets, roads, highways, and freeway improvements, under the jurisdiction of the Co-Permittees to reduce the discharge of Pollutants from the projects to the MEP. The draft guidance shall be submitted to the Executive Officer for review and approval and shall meet the performance standards for site design/LID BMPs, Source Control and Treatment Control BMPs as well as the

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[55] In-stream measures involve modifying the receiving stream channel slope and geometry so that the stream can convey the new flow regime without increasing the potential for erosion and aggradation. In-stream measures are intended to improve long-term channel stability and prevent erosion by reducing the erosive forces imposed on the channel boundary.

[56] In-stream control projects require a Stream Alteration Agreement from the California Department of Fish & Game, a CWA section 404 permit from the U.S. Army Corps of Engineers, and a section 401 certification from the Water Board. Early discussions with these agencies on the acceptability of an in-stream modification are necessary to avoid project delays or redesign.

HCOC criteria. The guidance and BMPs shall address streets, roads or highways under the jurisdiction of the Co-Permittees used for transportation of automobiles, trucks, motorcycles, and other vehicles, and excludes routine road maintenance activities where the surface footprint is not increased. The guidance shall incorporate principles contained in the USEPA guidance, "Managing Wet Weather with Green Infrastructure: Green Streets" to the MEP and at a minimum shall include the following:

a. Guidance specific to new road projects;

b. Guidance specific to projects for existing roads;

c. Size or impervious area criteria that trigger project coverage;

d. Preference for green infrastructure approaches wherever feasible;

e. Criteria for design and BMP feasibility analyses on a project-specific basis.

2. Within six months of approval by the Executive Officer, the Permittees shall implement the standard design and post-development BMP guidance for all road projects. Pending approval of the standard design and post-development BMP guidance, site specific WQMPs for streets road and highway projects shall be required pursuant to Section XII.D.2.

G. ALTERNATIVES AND IN-LIEU PROGRAMS

1. Within 18 months of adoption of this Order, the Permittees shall develop technically-based feasibility criteria for project evaluation to determine the feasibility of implementing LID BMPs which may include factors such as a groundwater protection assessment to determine if infiltration BMPs are appropriate for the site[57]. These criteria shall be submitted to the Executive Officer for approval. Only those projects that have completed a feasibility analysis as per the approved criteria should be considered for alternatives and in-lieu programs. If a particular BMP is not technically feasible, other BMPs should be implemented to achieve the same level of compliance, or if the cost of BMP implementation greatly outweighs the Pollution control benefits, the Co-Permittees may grant a waiver of the BMPs. All waivers, along with waiver justification documentation, must be submitted to the Executive Officer for approval in writing within 30 days prior to Permittee approval.

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[57] Such feasibility determinations may be based on regional analyses conducted by the Permittees (see finding G-14) or on site specific conditions. Site specific determinations shall be certified by a Professional Civil Engineer registered in the State of California, and will be documented in the project WQMP, which shall be approved by the Permittee prior to submittal to the Executive Officer. Within 30 days of submittal to the Executive Officer, the Permittee will be notified if the Executive Officer intends to take any action.

If a waiver is granted, the Permittees shall ensure that project proponents participate in one of the in-lieu programs discussed in this section.

2. The Permittees may collectively or individually propose to establish an Urban Runoff fund to be used for urban water quality improvement projects within the same watershed that is funded by contributions from developers granted waivers. The contributions should be at least equivalent to the cost savings for waived projects and the urban runoff funds shall be expended for projects that provide at least an equivalent amount of water quality improvement (there shall be no net impact on water quality due to a waived project). If a waiver is granted and an Urban Runoff fund is established, the Annual Report for the year should include:
   a. Total amount deposited into the funds; and
   b. The party responsible for managing the Urban Runoff fund;
   c. Projects funded or proposed to be funded with monies from the urban runoff fund with details on expected water quality improvement;
   d. Party or parties responsible for designing, construction, operation and maintenance of urban runoff funded projects, and
   e. Current status and a schedule for project completion.

3. The obligation to install Treatment Control BMPs at a New Development or Significant Redevelopment project is met if, for a common plan of development, BMPs are constructed with the requisite capacity to serve the entire common project, even if certain phases of the common project may not have BMP capacity located on that phase in accordance with the requirements specified above. The goal of the WQMP is to develop and implement practicable programs and policies to minimize the effects of urbanization on site hydrology, Urban Runoff flow rates, velocities, duration and time of concentration and Pollutant loads. This goal may be achieved through watershed-based Treatment Control BMPs, in combination with site-specific BMPs. All Treatment Control BMPs should be located as close as possible to the Pollutant sources, should not be located within Waters of the US, and Pollutant removal should be accomplished prior to discharge to Waters of the US. Regional Treatment Control BMPs shall be operational prior to occupation of any of the New Development or Significant Redevelopment project sites tributary to the regional Treatment Control BMP.

4. The Permittees may establish, where feasible and practicable, a water quality credit system for alternatives to infiltration, harvesting and use, evapotranspiration and other LID and Hydromodification requirements specified above. The following types of projects may be included in this credit system:
   a. Redevelopment projects that reduces the overall impervious area
   b. Brownfield redevelopment

c. High density developments (>7 units per acre)
d. Mixed use and transit-oriented development (within ½ mile of transit)
e. Dedication of undeveloped portions of the project site to parks, preservation areas and other pervious uses
f. Regional treatment systems with a capacity to treat flows from all upstream developments
g. Offsite mitigation or dedicated mitigation areas within the same watershed
h. Highly urbanized areas such as city center area
i. Historic Districts and Historic Preservation areas
j. Live-work developments
k. In-fill projects
l. Projects that enhance the transport of coarse sediment to the coast for beach replenishment.

5. The water quality credit system should not result in a net impact on water quality.

6. A summary of waivers of LID (along with a short description of the Section XII.G.2 through XII.G4 In-Lieu program selected), Hydromodification and Treatment Control BMPs along with any water quality credit granted, in-lieu projects, or urban runoff fund contribution required by each Co-Permittee shall be included in the Annual Report.

H. APPROVAL OF WQMP

Within 18 months of adoption of this Order, each Permittee shall develop and implement standard procedures and tools and include in its LIP the following:

1. The Permittees shall utilize a mechanism for review and approval of WQMPs, including a checklist that incorporates the minimum requirements of the model WQMP. The process for review and approval shall be described in the Permittees LIP.
2. The Co-Permittees shall maintain a database to track structural post-construction BMPs (consistent with XII.K.4 below).
3. Continue to ensure that the entity(ies) responsible for BMP maintenance and the mechanism for BMP funding is identified prior to WQMP approval.
4. The Permittees shall train those involved with WQMP reviews in accordance with Section XV, Training Requirements.

I. FIELD VERIFICATION OF BMPS

1. The Co-Permittees' permit close-out procedures shall include field verification that structural Site Design, Source Control and Treatment Control BMPs are designed, constructed and functional in accordance with the approved WQMP.
2. Prior to occupancy, the Co-Permittees shall verify through visual observation that the BMPs are working and functional.
3. The Co-Permittees may accept self-certification or third-party certification of BMPs from State-licensed professional engineers.

J. CHANGE OF OWNERSHIP AND RECORDATION

The Co-Permittees shall establish a mechanism to ensure that appropriate easements and ownerships are properly recorded in public records at the County and/or the city and the information is conveyed to all appropriate parties when there is a change in project or site ownership.

K. OPERATION AND MAINTENANCE OF POST-CONSTRUCTION BMPS

1. The Co-Permittees shall ensure that structural post construction BMPs are designed and implemented with control measures necessary to effectively minimize the creation of Nuisance or Pollution associated with vectors, such as mosquitoes, rodents, flies, etc. The Co-Permittee should work with the local vector agencies to ensure that structural post construction BMPs are designed to minimize the potential for vector breeding during operation and maintenance.
2. The Co-Permittees shall specify conditions of approval and as built inspections ensure that require proper maintenance and operation of any structural post construction BMPs including requirements for vector control.
3. The parties responsible for the maintenance and operation of the structural post construction BMPs, and a funding mechanism for operation and maintenance of structural post construction BMPs for the life of the project shall be identified prior to issuance of occupancy permits. Design of these structures shall allow adequate access for maintenance.
4. Each Co-Permittee shall maintain a database to track the operation and maintenance of the structural post construction BMPs installed after adoption of this Order. The database shall include: type of BMP; watershed where it is located; date of certification; party responsible for maintenance and any problems identified during inspection including any vector or nuisance problems.
5. Within 18 months of adoption of this order and annually thereafter, all Permittee-owned structural post construction BMPs installed after the date of this Order shall be inspected prior to the Rainy Season. The Co-Permittees shall also develop an

inspection frequency for New Development and Significant Redevelopment projects, based on the project type and the type of structural post construction BMPs deployed. Pursuant to XII.K.4, all New Development and Significant Redevelopment, structural post construction BMPs shall be inspected within the five-year Permit Term. The Co-Permittees shall ensure that the BMPs are operating and are maintained properly and all BMPs are working effectively to remove Pollutants in runoff from the site. If vector problems are identified, the Co-Permittees should work with the vector control agencies to remedy vector control problems. All inspections shall be documented and kept as Permittee record. The Co-Permittees may accept inspection reports conducted and certified by state licensed professional engineers in lieu of Co-Permittee inspections.

6. The Annual Report shall include a list of all structural post construction BMPs approved contained in the database required in XII.K.4 above.

L. PRE-APPROVED PROJECTS

The above provisions for LID and HCOC are not applicable to projects that have an approved WQMP as of the date of approval of the revised WQMP. The above provisions shall be implemented in a manner consistent with the MEP standard for all other projects 45 days from the date of approval of the revised WQMP. The Regional Board recognizes that full implementation may not be feasible for certain projects which have received tentative tract or parcel map or other discretionary approvals.

XIII. PUBLIC EDUCATION AND OUTREACH

A. The Permittees shall continue to implement the public education efforts already underway and shall continue to promote the most effective elements of the comprehensive public and business education strategy contained in the ROWD and Section 10 of the DAMP. As part of the Annual Report, the Permittees shall review their public education and outreach efforts and revise their activities to adapt to the needs identified in the annual reassessment of program priorities with particular emphasis on addressing the Pollutants of Concern. Results of this review shall direct the focus of its public education effort and cause recommendations for any changes to the public and business education program including: (1) how to make the multimedia efforts more effective; (2) a reevaluation of audiences and key messages for targeted behaviors; and (3) opportunities for participation in regional and statewide public education efforts. The goal of the public and business education program shall be to target 100% of the residents, including businesses, commercial and industrial establishments.

B. A status report on the requirements of this section and any changes to the on-going public education program shall be described in the Annual Report.

C. The Permittees shall implement an assessment program to measurably increase public knowledge of its communities regarding MS4 and impacts of Urban Runoff on Receiving Waters. The Permittees shall implement programs that can measure the change in behavior of its target communities to reduce Pollutant releases to the MS4 and the environment. A description of the program tasks, schedule and measurable goals shall be included in the first Annual Report due after adoption of this Order.

D. When feasible, the Permittees shall participate in joint outreach programs with other agencies including, but not limited to, the Santa Ana Watershed Project Authority, Caltrans, and other county and municipal storm water programs to ensure that a consistent message on storm water pollution prevention is disseminated to the public.

E. The Permittees shall continue to ensure that appropriate outreach materials are available for construction, industrial and commercial inspection programs. Outreach materials should be provided to Permittee inspectors for distribution to inspected facilities.

F. Within 18 months from the date of adoption of this Order, the Permittees shall ensure that they have developed, maintained and distributed BMP guidance for the control of those potentially polluting activities identified during the term of the 2002 MS4 Permit, which are not otherwise regulated by any agency, including guidelines for the household use of fertilizers, pesticides, herbicides and other chemicals, and guidance for mobile vehicle maintenance, carpet cleaners, commercial landscape maintenance, and pavement cutting. These guidance documents shall be distributed to the public, trade associations, etc., through participation in community events, trade association meetings and/or by mail.

G. The Permittees shall ensure that appropriate educational materials, including the BMP brochures, are provided to all new industrial and commercial enterprises within their jurisdiction at the time appropriate permits (e.g. business licenses or occupancy permits) are issued.

H. The Permittees shall continue to maintain, and if necessary enhance, public education materials to encourage the public to report: Illegal Dumping and unauthorized, non-storm water discharges from residential, industrial, construction and commercial sites into public streets, storm drains and to surface waterbodies and their tributaries; clogged storm drains; and faded stencils or missing catch basin markers. The Principal Permittee's hotline and web site shall provide guidance regarding where to locate information regarding general Urban Runoff pollution control measures. The hotline and website information shall be included in outreach materials and shall be listed in the governmental pages of prominent regional phone books and on the Co-Permittees' website.

I. The Permittees shall maintain a Public Education Committee to provide oversight and guidance for the implementation of the public education program. The Permittees shall

continue to participate in the Public Education Committee to review and update existing guidance for the implementation of the public education program. One of the functions of the Public Education Committee shall be to review outreach materials for construction, industrial and commercial inspection programs and residential outreach to ensure they appropriately address common violations observed during inspections. Once deficiencies are identified, alternative text to address the deficiency shall be developed within 6 months and reported in the Annual Report. The Public Education Committee shall meet at least twice per year.

J. The Permittees shall continue to sponsor or staff a table or booth at community, regional, and/or countywide events to distribute public education materials related to Urban Runoff pollution prevention to the public. Each Permittee shall participate in at least one event per year.

K. Successful implementation of the provisions and limitations in this Order will require the cooperation of all the public agency organizations within Riverside County having programs/activities that have an impact on Urban Runoff quality. This may include, but not be limited to, those listed in Appendix 2. As such, the Permittees should coordinate their efforts with those organizations where feasible and appropriate to ensure participation in implementing the requirements of this Order. The Permittees should notify the Regional Board where assistance is needed improving local cooperation.

L. Within 18 months of adoption of this Order, each Permittee shall develop BMP Fact Sheets for mobile businesses for distribution consistent with the requirements of Section XI.D.6. At a minimum, the mobile business Fact Sheets/training program should include: laws and regulations dealing with Urban Runoff and discharges to MS4; appropriate BMPs and proper procedures for disposing of Wastes generated from each mobile business category.

M. The Principal Permittee shall continue to develop and distribute BMP guidance for Permittee and contract field operations and maintenance staff to provide guidance in appropriate Pollution Prevention measures, how to respond to spills and reports of Illegal Discharges, etc.

XIV. PERMITTEE FACILITIES AND ACTIVITIES

A. Each Permittee shall continue to implement measures to ensure that their facilities and activities do not cause or contribute to a Pollution or Nuisance in Receiving Waters, as defined in Section 13050 of the Water Code. The Permittees must annually review their activities and facilities to determine the need for revisions to Section 5 of the DAMP and to their LIP. The Annual Report shall include the findings of this review and a schedule for any needed revisions. The Permittees should continue to use Facility Pollution Prevention Plans as noted in Chapter 5 of the DAMP to ensure that the Permittee facilities are not sources of Pollutants to the Waters of the US to the MEP.

B. Within 12 months of adoption of this Order, each Permittee shall review its inventory of fixed facilities listed in the DAMP, its field operations and MS4 facilities to ensure that Permittee facilities and activities are addressed by Facility Pollution Prevention Plans consistent with Chapter 5 of the DAMP and do not cause or contribute to a Pollution or Nuisance in Receiving Waters. Existing Facility Pollution Prevention Plans shall be reviewed to insure proper BMPs for these facilities. For Permittee facilities and/or activities tributary to CWA Section 303(d) Impaired Water Bodies that generate Pollutants for which the water body is Impaired, additional Pollutant-specific Source Control BMPs to target that Pollutant shall be identified and implemented in the Facility Pollution Prevention Plan to the MEP.

C. Each Permittee shall conduct inspections of its fixed facilities and field operations identified in Chapter 5 of the DAMP annually to ensure that they do not contribute Pollutants to Receiving Waters. The Permittees shall record the findings in the inspection forms developed by the Permittees. Each Permittee shall implement BMPs to manage the application, storage, and disposal of pesticides, herbicides, and fertilizers associated with their facilities and activities. At a minimum, the Facility Pollution Prevention Plans for these facilities and activities shall:

1. Ensure that Permittee applicators (including contractors) and distributors have appropriate training, permits, and certifications;
2. Utilize integrated pest management measures that rely on non-chemical solutions, to the extent practicable;
3. Promote the use of native vegetation into facility landscaping;
4. Include schedules for irrigation and chemical application to the extent feasible; and
5. Collect and properly dispose of unused pesticides, herbicides, and fertilizers.
6. The following BMP fact sheets are identified as minimum BMPs::
   i. SC-35/SC-61, Safer Alternative Products
   ii. SC-41, Building & Grounds Maintenance
   iii. SC-60, Housekeeping Practices
   iv. SC-73, Landscape Maintenance

D. Each Permittee shall review, update, and implement the individual clean out schedules and frequency for its MS4, including open channels, catch basins, retention/detention facilities and wetlands created for Urban Runoff treatment during the Wet and Dry Season to protect Receiving Water quality consistent with the MEP standard. The inspection and cleaning frequency for all portions of the specified MS4 shall be included in each Permittee's LIP and shall be evaluated annually to determine the need for adjusting the inspection and cleaning frequency. Each Permittee must clean those MS4 facilities where there is evidence of Illegal Discharge. In addition, each Permittee must clean those retention/detention basins and MS4 where the inspection reveals that the storage

volume is about 25% full or if accumulated sediment or debris impairs the hydraulic capacity of the facility.

E. Unless otherwise supported by field information, each Permittee shall at a minimum inspect, clean, and maintain at least 80% of its open channels, catch basins, retention/detention basins, and wetlands created for Urban Runoff treatment on an annual basis, with 100% of the facilities in a two year period. The MS4 clean out schedule shall continue to be included in the Annual Report.

F. Each Permittee shall examine opportunities to retrofit existing MS4 facilities with water quality protection measures, where feasible.

G. PERMITTEE COMPLIANCE WITH GENERAL PERMITS

1. GENERAL CONSTRUCTION PERMIT

a. All Permittee Construction Sites shall be in compliance with the latest adopted version of the General Construction Permit.

b. This Order authorizes the discharge of storm water runoff from Permittee Construction Sites that may result in land disturbance consistent with the acreage criteria of the General Construction Permit.

c. Prior to commencement of construction activities, the Permittees shall notify the Executive Officer of the proposed Construction Site by submitting a NOI, or Permit Registration Documents (PRDs) as provided in Attachment 5, and a location map depicting the Construction Site location. The filing fees for these NOIs/PRDs are waived for the Permittees.

d. Upon completion of the construction project, the Executive Officer shall be notified of the completion of the project by submitting (1) A Notice of Termination (NOT), provided in Attachment 5. (2) Photographs of the completed project; (3) A site map (depicting the project location and the locations of structural post-construction BMPs, including the latitude and longitude if appropriate); and (4) copies of the final field verification reports required under Section XII.I.

e. The Permittees shall develop, approve, and implement a WQMP for Permittee projects that meet the requirements of Section XII.D. of this Order.

f. The Permittees shall develop and implement a SWPPP and the monitoring and reporting program for their construction projects that meet the requirements of the latest version of the General Construction Permit. The Permittee must review and approve SWPPPs prepared by their contractors.

g. The Permittees shall give advance notice to the Executive Officer of planned changes in the construction activity, which may result in non-compliance with the latest version of the General Construction Permit.

h. Emergency Permittee projects required to protect public health and safety are exempted from compliance with the requirements of this subsection until the emergency ends, at which time they need to comply with the requirements of this section.

2. GENERAL DE-MINIMUS PERMIT DISCHARGES

a. The Permittees are authorized to discharge de-minimus types of discharges listed under the latest adopted version of the Regional Board's General De Minimus Discharge Permit, currently Order No. R8-2009-0003. The de-minimus discharges from Permittee owned and/or operated facilities and/or activities shall be in compliance with Order No. R8-2009-0003 except that the Permittees need not pay the filing fee.

b. The Permittees shall notify the Executive Officer of the proposed discharge at least 15 days prior to start of the discharge, by submitting a NOI and supporting documents, as provided in Attachment 7.

c. For existing Permittee Dischargers (authorized to discharge under Order No. R8-2009-003 prior to the adoption date of this Order), discharges will continue to be regulated under the terms and conditions of Order No. R8-2003-0003 until a new discharge authorization is issued, provided that the Discharger submits, by June 10, 2010, an updated NOI, a copy of the current Monitoring & Reporting Program previously issued to the Discharger, and proposed treatment modifications (if any). If no application for continued discharges are submitted by that date, the Discharger shall do one of the following:

   i. Cease discharge and submit a letter informing the Regional Board that coverage under Order R8-2009-003 is no longer needed; or

   ii. Apply for new discharge authorization as a new de-minimus discharge, under this Order.

XV. TRAINING PROGRAM FOR STORM WATER MANAGERS, PLANNERS, INSPECTORS AND MUNICIPAL CONTRACTORS

A. Within 24 months of adoption of this Order, the DAMP and each Permittee's LIP shall be updated to include a program to provide formal and where necessary, informal training to Permittee staff that implement the provisions of this Order. Formal training must be implemented as described herein and may consist of regional training provided by the Permittees or individual Co-Permittee training provided in-lieu of Principal Permittee training. Informal training (i.e. tailgate training) shall be implemented by each Permittee on an as-needed basis to supplement the formal

training. Each Permittee shall maintain a written and/or electronic record of stormwater training provided to its storm water and related program staff.

B. The training programs should be coordinated with the local Vector Control District to ensure that vector control issues related to post-construction BMPs maintenance and operation are incorporated into the training curriculum.

C. **Formal Training**: The formal training programs shall educate Permittee employees responsible for implementing requirements of this Order, by providing training on the following Permittee activities: construction site inspection, WQMP review, residential/industrial/commercial site inspection, and Permittee facility maintenance. Formal training may be conducted in classrooms or using videos, DVDs or other multimedia. The program shall consider all applicable Permittee staff such as storm water program managers, construction/industrial/ commercial/residential inspectors, planners, engineers, public works crew, etc. and shall: define the required knowledge and competencies for each Permittee compliance activity, outline the curriculum, include testing or other procedures to determine that the trainees have acquired the requisite knowledge to carry out their duties, and provide proof of completion of training such as Certificate of Completion, and/or attendance sheets. The formal training curriculum shall:

1. Highlight the potential effects that Permittee or Public activities related to their job duties can have on water quality.
2. Overview the principal applicable water quality laws and regulations that are the basis for the requirements in the DAMP.
3. Discuss the provisions of the DAMP that relate to the duties of the target audience, including but not limited to:
    a. The requirements of the DAMP regarding Storm Water Ordinances, resolutions, codes, and standards that relate to the duties of the target audience, including enforcement thereof;
    b. Overview of CEQA requirements contained in Section XII.C of this Order.
    c. Implementation and assessment of SWPPPs and Facility Pollution Prevention Plans relative to the duties of the target audience;
    d. Selection, implementation and maintenance of appropriate BMPs relative to the duties of the target audience;
    e. Tools, checklists and procedures included in the DAMP to assist in implementing the requirements of this Order relative to the duties of the target audience.

D. **Informal Training:** The informal training shall ensure that staff have the requisite knowledge to implement the applicable provisions in the Permittee's LIP, such as (but not limited to):

1. The requirements of local Storm Water Ordinances, resolutions, codes, and standards that relate to the duties of the target audience;
2. Local tools, checklists and/or procedures to implement the requirements of this Order relative to the duties of the target audience.
3. The proper use and maintenance of erosion and sediment controls;
4. Vector control issues related to storm water pollution control BMPs.

E. **Reporting**: Formal training shall be summarized and documented in the Annual Reports.

F. **Schedule**: At a minimum, the training schedule should include the following:

1. New Permittee employees responsible for implementing requirements of this Order must receive informal training within six months of hire and formal training within one year of hire.
2. Permittee facility maintenance staff must receive formal training at least once every two years.
3. Permittee inspection and code enforcement (if applicable) employees must receive formal or informal refresher training focused on appropriate BMP implementation at least once a year prior to the rainy season.
4. Other existing Permittee employees responsible for implementing the requirements of this Order must receive formal training at least once during the term of this Order.
5. The start date for training programs described in this Section shall be included in the schedule required in Section III.A.1.q, but shall be no later than six months after Executive Officer approval of DAMP updates applicable to the Permittee activities described in Section XIV.

G. The Permittees shall require verification of BMP training from contract staff where applicable.

H. The Permittee(s) shall include designated Regional Board staff on training notification e-mails announcing upcoming formal training sessions.

XVI. NOTIFICATION REQUIREMENTS

A. Within 24 hours of discovery, the Permittees shall provide oral or email notification to Regional Board staff of events within its jurisdiction that are determined to be an Emergency Situation. Following oral notification, a written report must be submitted within 10 days of receipt of notice of the Emergency Situation, detailing the nature of the non-compliance, any corrective action taken by the site/facility owner, other relevant information (e.g., past history of the Emergency Situation, environmental damage resulting from the Emergency Situation, site/facility owner responsiveness) and the type of enforcement, consistent with Section 4 of the DAMP, that will be carried out by the Co-Permittee. Further, incidences of noncompliance shall be

recorded along with the information noted in the written report and the final outcome/enforcement for the incident in the databases for Construction Sites, and Industrial or Commercial Facility inspections, as appropriate.

B. Notification requirements for non-Emergency Situations that are discovered during the course of Construction Site and Industrial Facility inspections that may be a violation of the General Stormwater Permits are addressed in Sections XI.A.7 of this Order.

C. Sewage spill notification shall be consistent with the timelines specified in the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order No. 2006-0003-DWQ.

D. All reportable quantities of Hazardous Waste spills as per 40CFR 117 and 302 shall be reported within 24 hours. All spill incidents shall be also included in the Annual Report. These requirements are consistent with the Notification requirements for IC/IDs that are addressed in Section IX.B of this Order.

E. Enforcement requirements for Construction Sites and Industrial Facilities operating without an applicable General Stormwater Permit are specified in Section XI.A.7. These Sites and Facilities shall be reported within 14 calendar days to Regional Board staff by electronic mail or other written means. Permittees' notifications of facilities' failure to obtain required coverage under the General Construction Permit, or General Industrial Permit, including requirements to file PRDs. A PRD, NOI, No Exposure Certification, Notice of Non-applicability, and/or 401 Certification must include, at a minimum, the following documentation:

1. Name of the Site or Facility
2. Operator of the Site or Facility
3. Owner of the Site or Facility
4. Construction or Commercial/Industrial activity being conducted at the Site or Facility that is subject to the General Construction Permit, General Industrial Permit or 401 Certification
5. Records of communication with the facility operator regarding the violation, which must include at least an inspection report.

F. The Permittees shall report to the Executive Officer:

1. Any enforcement actions and known discharges of Urban Runoff to MS4 facilities, known to the Permittees, which may have an impact on human health or the environment consistent with Sections XI.A and XI.B above; if the discharge is to Canyon Lake or any tributary to Canyon Lake, Elsinore Valley Municipal Water District shall also be notified immediately; and
2. Any suspected or reported activities on federal, state, or other entity's land or facilities, where the Permittees do not have any jurisdiction, and where the suspected or reported activities may be contributing Pollutants to Waters of the US

XVII. PROGRAM MANAGEMENT ASSESSMENT/DAMP REVIEW

A. By November 30 of each year, the Permittees shall evaluate the effectiveness of the Urban Runoff management program described in the DAMP to determine the need for any revisions in order to reduce Pollutants in MS4 discharges consistent with the MEP standard consistent with the reporting requirements in Appendix 3, Section IV.B. In addition, the first Annual Report (November 2010) after adoption of this Order shall include the following:

1. Review of the formal training needs of Permittee employees.
2. Review of coordination meeting/training for the designated NPDES inspectors.
3. Proposal for assessment of Urban Runoff management program effectiveness on an area wide as well as jurisdiction-specific basis. Permittees shall utilize the CASQA Guidance[58] for developing these assessment measures at the six outcome levels. The assessment measures must target both water quality outcomes and the results of municipal enforcement activities consistent with the requirements of Appendix 3, Section IV.B.

B. The Annual Report shall include the findings of this review and a schedule to address necessary revisions, or a copy of the amended DAMP with the proposed changes. Replacement pages are acceptable if modifications are not extensive. Annual Reports shall also be submitted in electronic format.

C. Upon the effective date of this Order, the Permittees shall implement the 2007 DAMP and modify it to be consistent with the requirements of this Order and the schedules contained herein.

D. Each Permittee shall designate at least one representative to the Management Steering Committee and Technical Committee. The Principal Permittee shall be notified immediately, in writing, of changes to the designated representative to either Committee. The designated representative for each Committee shall attend that Committee's meeting as follows: at least one (1) out of two (2) Management Steering Committee meetings and eight (8) out of ten (10) Technical Committee meetings per year to discuss issues related to permit implementation and regional and statewide issues.

E. The Permittees shall continue to implement all elements of the approved DAMP. Program elements revised in compliance with the requirements of this Order must be implemented in conformance with the schedules specified in this Order following approval of the Executive Officer.

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[58] CASQA, May 2007. Municipal Storm Water Program Effectiveness Assessment Guidance.

XVIII. FISCAL RESOURCES

A. Each Permittee shall exercise its full authority to secure the resources necessary to meet the requirements of this Order. This Order may be revised to adjust time schedules to accommodate prioritization of available resources.

B. The Permittees shall prepare and submit a financial summary to the Executive Officer. The financial summary shall be submitted with the Annual Report each year and shall, at a minimum, include the following:

1. Each Permittee's MS4 Permit compliance expenditures for the previous fiscal year;
2. Fiscal developments that may impact availability of funding for MS4 Permit compliance program implementation and to achieve the required implementation schedule;
3. Each Permittee's MS4 Permit compliance program budget for the current fiscal year;
4. A description of the source of funds to implement the MS4 Permit compliance program, and;
5. Each Permittee's estimated budget to implement the MS4 Permit compliance program for the next fiscal year.

XIX. MONITORING AND REPORTING PROGRAM

The Permittees must comply with Monitoring and Reporting Program No. R8-2010-0033, Appendix 3, and any revisions thereto, which are hereby made a part of this Order. The Executive Officer is hereby authorized to revise the Monitoring and Reporting Program in a manner consistent with this Order to allow the Permittees to participate in regional, statewide, national or other monitoring and reporting programs in lieu of or in addition to Monitoring and Reporting Program No. R8-2010-0033. In addition, dates for completion and implementation of certain program elements and reporting requirements are outlined in the Monitoring and Reporting Program.

XX. PROVISIONS

A. All reports submitted by the Permittees as per the requirements in this Order for the approval of the Executive Officer shall be publicly noticed and made available on the Regional Board's website, or through other means, for public review and comments. The Executive Officer shall consider all comments received prior to approval of the reports. Any unresolved significant issues shall be scheduled for a public hearing at a Regional Board meeting prior to approval by the Executive Officer.

B. Permittees shall demonstrate compliance with all the requirements in this Order and shall implement the DAMP and any modifications, revisions, or amendments thereto, which are developed pursuant to this Order or determined by the Permittees to be necessary to

meet the requirements of this Order. The DAMP, including any approved amendments thereto is hereby made an enforceable component of this Order.

C. The Permittees shall implement all elements of the DAMP and its components. Where the dates in the DAMP are different from the corresponding dates in this Order, the dates in this Order shall prevail. Any proposed revisions to the DAMP shall be submitted with the Annual Report for review and approval by the Executive Officer. All approved revisions to the DAMP shall be implemented as per the time schedules approved by the Executive Officer. In addition to those specific controls and actions required by: (1) the terms of this Order and (2) the DAMP and its components, each Permittee shall implement additional controls, if any are necessary, to reduce the discharge of Pollutants in Urban Runoff consistent with the MEP standard.

D. Certain BMPs implemented or required by the Permittees for Urban Runoff management may create habitat for vectors (e.g., mosquitoes and rodents) if not properly designed and maintained. Close collaboration and cooperative effort between the Permittees and local vector control agencies and the State Department of Health Services are necessary to minimize potential vector habitat and public health impacts resulting from vector breeding. Nothing in this Order is intended to prohibit inspection or abatement of vectors by the State or local vector control agencies in accordance with the respective Health and Safety Code.

E. Upon approval by the Executive Officer all plans, reports and subsequent amendments required by this Order shall be implemented and shall become an enforceable part of this Order. Prior to approval by the Executive Officer, these plans, reports and amendments shall not be considered as an enforceable part of this Order.

F. The MS4 permit application and special NPDES program requirements are contained in 40 CFR 122.21 (a), (b), (d)(2), (f), (p); 122.41 (a), (b), (c), (d), (e), (f), (g), (h), (i), (j), (k), (l); and 122.42 (c), and are incorporated into this Order by reference.

G. The Permittees must comply with all terms, requirements, and conditions of this Order. Any violation of this Order constitutes a violation of the CWA, its regulations and the California Water Code, and is grounds for enforcement action, Order termination, Order revocation and re-issuance, denial of an application for re-issuance, Order revisions, or a combination thereof.

H. Permittees must continue to take reasonable steps to minimize or prevent any discharge to the MS4 that has a reasonable likelihood of adversely affecting human health or the environment.

I. Regional Board staff, USEPA, and other authorized representatives must be allowed to:

1. Inspect Permittee records associated with compliance of this Order.

2. Access and copy records that are kept under the conditions of this Order.

3. Photograph and inspect any facilities or equipment (including monitoring and control equipment) that are related to or may impact storm water discharge or authorized Non-storm Water discharge.

4. Conduct sampling, and monitoring activities for the purpose of assuring compliance with this Order, or as otherwise authorized by the CWA and/or the Water Code.

5. Review the Permittee's programs and request the Regional Board to authorize modification to Permittee programs to comply with the requirements of this Order.

6. Request copies of data, monitoring reports, and sampling data and copies of the Permittee's conclusions and evaluations of the data.

J. This Order does not convey any property rights or any exclusive privileges.

K. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations.

L. When Permittees become aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Water Board, State Board, or USEPA, the Permitttees must promptly submit such facts or information.

M. All applications, reports, or information submitted to the Regional Board, State Board, and/or USEPA are to be signed and certified by either:

1. A principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA)

2. A duly authorized representative of the person in 1, above. A person is a duly authorized representative only if the authorization is made in writing by a person described above;

3. The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and

4. The written authorization is submitted to the Executive Officer.

5. If an authorization described above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization must be submitted to the Executive Officer prior to or together with any reports, information, or applications, to be signed by an authorized representative.

6. Any person signing a document described above must make the following certification:

   "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

XXI. PERMIT MODIFICATION

A. Following appropriate public notice, and in accordance with 40 CFR 122.41(f), this Order may be modified, revoked or reissued prior to its expiration date for the following reasons:
   1. To address significant changes in conditions identified in the technical reports required by the Regional Board which were unknown at the time of the issuance of this Order;
   2. To incorporate applicable requirements of statewide water quality control plans adopted by the State Water Resources Control Board or any amendments to the Basin Plan (including TMDLS) approved by the Regional Board, the State Board and, if necessary, by the Office of Administrative Law and the USEPA;
   3. To comply with any applicable requirements, guidelines, or regulations issued or approved under the Clean Water Act, if the requirements, guidelines, or regulations contain different conditions or additional requirements than those included in this Order; or,
   4. To incorporate new or revised program elements and compliance schedule(s) necessary to comply with this Order;

B. The filing of a request by the Permittees for modification, revocation and re-issuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any conditions of this Order.

C. Pursuant to Section 13228 of the Water Code, the Regional Board may exercise its option for allowing the portion of the City of Murrieta located within the Santa Ana Region to be regulated by the San Diego Regional Water Quality Control Board under its Riverside County MS4 Permit. Similarly, if the San Diego Regional Water Quality Control Board authorizes this Regional Board to exercise authority over the City of Menifee within the

portions of the City regulated by the San Diego Regional Water Quality Control Board, this Regional Board will exercise its authority under this Order in those Regions.

XXII. PERMIT EXPIRATION AND RENEWAL

A. This Order expires on January 29, 2015, and the Permittees must file a ROWD no later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements. The ROWD shall, at a minimum, include the following:

1. Names and mailing address(es) of the primary administrative and technical contacts for the Permittees that operate the MS4;
2. Any revisions to the DAMP including, but not limited to, all the activities the Permittees propose to undertake during the next permit term, goals and objectives of such activities, an evaluation of the need for additional source control and/or structural BMPs, any proposed pilot studies, etc.;
3. Changes in land use and/or population including map updates;
4. Any significant changes to the MS4 including map updates of the MS4; and
5. An assessment of the overall Urban Runoff management program and its effectiveness in meeting Water Quality Standards. If Water Quality Standards are not being met, the ROWD shall include new or revised program elements and compliance schedule(s) necessary to comply with Section VI of this Order.

B. The ROWD, Annual Reports and other information submitted under this Order shall be signed by either a principal executive officer or a ranking elected official (40 CFR 122.22(a)(3)) or a duly authorized representative as per 40 CFR 122.22(b).

C. This Order shall serve as an NPDES Permit pursuant to Section 402(p) of the Clean Water Act, or amendments thereto, and shall become effective ten days after the date of its adoption provided the Regional Administrator of the USEPA has no objections. If the Regional Administrator objects to its issuance, the Permit shall not become effective until such objection is withdrawn.

D. The Regional Board is authorized to enforce the terms of this permit under several provisions of the CWC, including, but not limited to, sections 13385, 13386, and 13387.

E. Order No. R8-2002-0011 is hereby rescinded.

I, Gerard J. Thibeault, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on January 29, 2010.

Gerard J. Thibeault
Executive Officer

EXHIBIT "18"

ATTACHMENT 4

Comparison Between the Requirements of Tentative Order 2001-01, the Federal NPDES Storm Water Regulations, the Existing San Diego Municipal Storm Water Permit (Order 90-42), and Previous Drafts of the San Diego Municipal Storm Water Permit

A table comparing the Tentative Order's requirements with the requirements of other pertinent documents.

PERMITS COMPARISON (DRAFT)

Comparison Between the Requirements of Tentative Order No. 2001-01, the Federal NPDES Storm Water Regulations, the Existing San Diego Municipal Storm Water Permit (Order No. 90-42), and Previous Drafts of the San Diego Municipal Storm Water Permit

Conclusions

1. **Urban runoff causes or contributes to the impairment of every known impaired water body in the San Diego Region** (i.e., every 303(d) listed water body in the Region is impaired, at least in part, because of urban runoff).

2. **During the past 10 years (the period during which the Copermittees have been subject to Order No 90-42), water quality in the Region has continued to decline. The decline is the result of the increasing urban runoff pollution associated with the growth of the Region** (i.e., increasing urban development and human population).

3. **The continued degradation of the Region's receiving waters is evidence that current efforts to control urban runoff are not working** (i.e., current Copermittee Urban Runoff Management Programs under Order No. 90-42 are either inadequate or ineffective). In other words, we are losing the battle against urban runoff pollution.

4. **More must be done to reduce urban runoff pollutants if the beneficial uses (e.g., fishing, swimming, aquatic habitat, etc.) of the Region's receiving waters are to be protected.**

5. **Tentative Order No. 2001-01 (the proposed renewal of Order No 90-42) is the answer. If properly implemented, Tentative Order 2001-01 will significantly "slow the current rate" of water quality degradation in San Diego. Furthermore, the Tentative Order has the potential to "improve" the quality of San Diego receiving waters over the long term (i.e., 10-20 years).**

6. **Tentative Order No. 2001-01 is the product of an evolving development process that has included the release of two previous drafts and spanned more than six years.** The Tentative Order incorporates the SDRWQCB's responses to over 200 pages of public comments on the 1995 and 1998 drafts of the permit.

7. **Because Order No. 90-42, the interim drafts, and Tentative Order No. 2001-01 are all based on the same 1990 federal regulations, the underlying objectives and essential requirements of these documents are all "fundamentally the same".** In other words, Tentative Order No. 2001-01 is not a "new" permit. It has the same underlying objectives and requirements as Order No. 90-42, the "early" first round permit to which the Copermittees have been subject for the past ten years.

8. **Although fundamentally very similar, Tentative Order 2001-01 will require Copermittees to do more and to expend a greater level of effort than is currently required under Order No. 90-42.**

9. **Relative to Order No. 90-42, the requirements of Tentative Order No. 2001-01 are significantly expanded in that they are more numerous, more specific/detailed, and more stringent than the requirements in Order No. 90-42.** The SDRWQB believes that the expanded requirements are justified and necessary in light of the declining quality of the Region's receiving waters.

10. **Approximately 80% of the requirements contained in Tentative Order No 2001-01 are also contained in the second draft of the permit released October 1998.** This means approximately 80% of the permit requirements have been known to the Copermittees (and available for their review and implementation) for at least two years.

11. **The remaining 20% of the requirements in the Tentative Order are "new", meaning that they have been added within the past two years.** If 80% of the permit has been known for at least two years, then theoretically, the Copermittees have had the recent 51 day review period (ending Nov 30, 2000) to assimilate the new remaining 20% of the permit[1].

12. **Greater than 40% of the requirements contained in Tentative Order No 2001-01 are also contained in the Copermittee's current first round permit, Order No. 90-42.** This means that at least 40% of the Tentative Order's requirements have been known to the Copermittees for the past ten years. Accordingly, a Copermittee that is currently in compliance with Order No. 90-42 will have at least 40% of the Tentative Order's requirements already met and fully implemented during the past ten years.

13. **Of the 80% of the Tentative Order's requirements that have been known to the Copermittees for at least two years, half (or 50% of 80%) have been known to the Copermittees for no less than 10 years and half have been known for no less than two years.**

14. **Approximately 60% of the requirements in Tentative Order 2001-01 are based solely on the 1990 federal NPDES Storm Water Regulations. The remaining 40% of the requirements in the Tentative Order "exceed the federal regulations". Requirements that "exceed the federal regulations" are either more numerous, more specific/detailed, or more stringent than the requirements in the regulations.**

15. **The 40% of the requirements in Tentative Order 2001-01 which "exceed the federal regulations" are based almost exclusively on (1) guidance documents**

[1] Current law requires a 45 day comment period.

developed by USEPA[2]; and (2) SWRCB's orders describing statewide precedent setting decisions on MS4s permits[3].

16. **The SDRWQCB is authorized to include requirements in the Tentative Order which "exceed the federal regulations" under both section 402(p)(3)(iii) of the Clean Water Act, as well as section 13377 of the California Water Code.** In the course of carrying out its mission, the SDRWQCB is authorized to require any more stringent controls it deems necessary to protect the beneficial uses of receiving waters, address specific local problems (e.g., beach closures), implement water quality control plans, or prevent nuisance.

17. **Taken as a whole, the requirements contained in Tentative Order 2001-01 represent the SDRWQCB's interpretation/definition of MEP for the San Diego Region.** MEP, or the maximum extent practicable, is the technology-based standard established by Congress for municipal dischargers of urban runoff (i.e., MS4 dischargers).

18. **The inclusion in a renewal MS4 permit (e.g., Order No. 2001-01) of requirements that are more stringent than those in an initial MS4 permit is supported by USEPA[4] and the SWRCB[5].** Over time it is expected that subsequent MS4 permits will require an increasing level of effort on the part of the municipalities that is commensurate with the need to protect beneficial uses. This is particularly appropriate where the initial permit was an "early" permit.

19. **SDRWQCB has Ample Legal Authority to Adopt Tentative Order No. 2001-01.** Each of the requirements contained in Tentative Order is solidly grounded in the Clean Water Act, the California Water Code, the federal storm water regulations, USEPA guidance documents on MS4 permits, and SWRCB Orders relating to MS4 permits.

Comparison Table

The attached table, showing the development process of Tentative Order No. 2001-01, is provided to call attention to the similarities and differences between the requirements of

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[2] Environmental Protection Agency. 1992. Guidance Manual for the Preparation of Part 2 of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA 833-B-92-002.

[3] In Orders WQ 98-01 and 99-05, the SWRCB prescribed specific precedent setting Receiving Water Limitations language to be included in all future MS4 permits. On October 5, 2000 the SWRCB made its final decision to uphold the LARWQCB's adoption of Standard Urban Storm Water Mitigation Plans (SUSMPs) requirements for new development in MS4 permits.

[4] U.S. Environmental Protection Agency. 1996. Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits. 61 FR 43761.

[5] On October 5, 2000 the SWRCB made its final decision to uphold the LARWQCB's adoption of Standard Urban Storm Water Mitigation Plans (SUSMPs) for new development in MS4 permits.

Tentative Order No. 2001-01 and the current San Diego Municipal Storm Water Permit (Order No. 90-42). Additionally the table compares both the existing and proposed permits, as well as the two previous drafts, to the1990 federal NPDES Storm Water Regulations for Phase I (federal regulations)[6].

The orders, regulations, and drafts are presented in the table chronologically so that the evolution of the Tentative Order's requirements is evident over time. The differences and similarities between the various documents can be observed in the table by noting the number of "X's" in each column. An "X" indicates that a given requirement is included in the document; while a "-" means that the requirement is missing.

Order No. 90-42 was the first document included in the table to be issued (in July of 1990), and has the least number of requirements. As the table indicates, Order 90-42 was an "early" permit, in that it was released prior to the November 1990 promulgation of the Federal NPDES storm water regulations. Although Order No. 90-42 contained the "essentials" of the 1990 regulations, the requirements were written in very broad generic and often vague terms. Broad generic terms were incorporated into the permit for the purpose of providing the maximum amount of flexibility to the Copermittees in implementing the new requirements (flexibility was, in fact, the stated reason for issuing the permit in advance of the final regulations).

When the federal regulations were issued by the United States Environmental Protection Agency (USEPA) in November of 1990, they were significantly more detailed and contained more requirements than Order No. 90-42. **The federal regulations, which implement and clarify the federal statue, specify the minimum fundamental or essential requirements that must be contained in all municipal storm water permits.** For this reason, the existing, proposed, and previous drafts of San Diego Municipal Storm Water permit are based on, and grounded in, the federal regulations. It is to the federal regulations that each of the documents in the table should be ultimately compared. To enhance understanding and clarify the federal regulations, USEPA's intent in drafting the regulations was expanded upon in the "Preamble" to the federal regulations and in several guidance documents (which provide further detail and insight on USEPA intent). These supporting documents have also been relied upon in developing the requirements of the Tentative Order and its previous drafts.

Five Fundamental Requirements of an MS4 Permit

When distilled down to its essence, the federal regulations direct that municipalities implement an Urban Runoff Management Program that, at a minimum, includes the five following fundamental requirements:

[6] The 1990 final phase I NPDES federal storm water regulations, codified at 40CFR 122.26, implement and interpret section 402(p) of the Clean Water Act. Section 402(p) is the section of the Clean Water Act that requires municipalities to obtain an NPDES permit for their discharges of storm water. The 1987 amendments to the Clean Water Act added section 402(p). The Clean Water Act is the 1976 federal statue which requires NPDES permits to regulate point source discharges of pollutants to waters of the United States.

1. Prohibit non-storm water discharges into MS4s.

2. Implement best management practices (BMPs) to reduce pollutant discharges into MS4s to the maximum extent practicable (MEP).

3. Ensure that discharges from the MS4 do not cause or contribute to an exceedance of water quality objectives in receiving waters.

4. Identify (actively find) and eliminate sources of illicit discharges.

5. Enforce local ordinances and permits.

Need for Increased Permit "Specificity"

The table below demonstrates the increase in permit specificity over time. There are several important reasons for the increase in the specificity of the permit language, which are discussed below.

1. Copermittees Requested Increased Specificity; Tentative Order 2001-01 provides Increased Specificity

Copermittees have repeatedly requested that the SDRWQCB define the minimum levels of actions/efforts required on their parts to keep them in minimum compliance with Order No. 90-42. As previously explained, the early permit was purposely written in broad terms to provide maximum flexibility the Copermittees. For example, Order No. 90-42 directs the Copermittees to develop and implement a comprehensive Urban Runoff Management Program, but unlike the Tentative Order, provides very little direction or detail on what that program must contain, and even less direction on minimum levels of effort required for compliance. As a result, many Copermittees frequently ask the SDRWQCB to provide direction and specificity on these topics. Tentative Order No. 2001-01 directly responds to this request by specifying minimum required program components, as well as the minimum elements of each component. These types of definitions require specific language, rather than broad directives, since they convey all of the activities expected of the Copermittees. In this way, the Tentative Order defines the minimum level of effort needed for compliance. A permit which describes each of the activities to be conducted will be greater in length and detail than a permit that does not. Although responsive to the Copermittees' request, much of the specifics provided in the Tentative Order had already been provided to the Copermittees over ten years ago in the form of the federal regulations.

2. Copermittees Requested that MEP be Defined; Tentative Order 2001-01 Defines MEP

Maximum Extent Practicable or MEP is the technology-based standard established by Congress in the Clean Water Act (section 402(p)(3)(B)(iii)) that municipal dischargers of storm water must meet. Technology-based standards establish the level of pollutant

reductions that dischargers must achieve, typically by treatment or by a combination of treatment and source control BMPs. In this case, municipal dischargers are required to reduce the discharge of pollutants into and from their MS4s to the MEP. The MEP standard therefore provides specificity about the minimum amount of effort needed for permit compliance. MEP considers economics and is generally, but not necessarily, less stringent than BAT[7]. A definition of MEP is not provided either in the statute or in the regulations. Instead the definition of MEP is dynamic and is intended to be defined over time by the following process: municipalities propose their definition of MEP by way of their Urban Runoff Management Programs. The total collective and individual activities conducted pursuant to their Urban Runoff Management Programs become their "proposal" for MEP, as it applies both to their overall management program and level of effort, as well as to any specific activity (e.g., what is MEP for street sweeping, or MEP for sanitary sewer maintenance?).

In a memorandum dated February 11, 1993 entitled "Definition of Maximum Extent Practicable," Elizabeth Jennings, Senior Staff Counsel for the SWRCB writes "...to achieve the MEP standard, municipalities must employ whatever best management practices (BMPs) are technically feasible (i.e., are likely to be effective) and are not cost prohibitive". She goes on to state, in part, "...The final determination regarding whether a municipality has reduced pollutants to the maximum extent practicable can only be made by the Regional or State Water Boards, and not by the municipal discharger."

Tentative Order No. 2001-01 defines MEP in the San Diego Region. The overall program scope and level of effort specified in the Tentative Order's Urban Runoff Management Programs is the SDRWQCB's interpretation of MEP. By defining the minimum standard, the SDRWQCB has eliminated much of the guesswork and uncertainly previously associated with permit compliance.

3. Copermittees Provided Substantial Comments on Previous Drafts; Tentative Order No. 2001-01 Responds to All Comments Received

Tentative Order No. 2001-01 is detailed in its requirements in part due to the extended reissuance process it has undergone. Drafts of the San Diego Municipal Storm Water Permit have been released for public comment twice before (in 1995 and 1998). During the course of development, the SDRWQCB has asked for and received a significant number of comments on previous drafts (informally during individual discussions and collective meetings, as well as formally in more than 200 pages of written comments). Each comment has been carefully reviewed and considered. The language in Tentative Order No. 2001-01 incorporates the SDRWQCB's responses to all comments received prior to its release on October 11, 2000.

Over the years and in a variety of forums, both the Copermittees and the public have generally sought more clarification and detailed explanations of permit requirements.

[7] BAT, or best available technology, is the technology-based standard established by Congress for industrial dischargers of storm water.

Many of the comments received on earlier drafts have contained specific requests for the SDRWQCB to provide additional clarification or specificity on a variety of permit requirements.

In response to these comments, the level of detail of the Tentative Order has increased over time. This evolution can be seen in the attached table by the increasing number of requirements in each subsequent issuance of the Tentative Order (note totals at end of table). Tentative Order 2001-01 provides the additional clarification and increased specificity requested, while seeking to address the entire scope and variety of issues raised during the lengthy public participation process. One consequence of an extended development process and repeated requests for greater specificity, is that overall volume of the permit has also increased proportionately over the years. It may be interesting to note that many of the "very recently received" comments on Tentative Order 2001-01 continue to request additional clarification on specific requirements.

4. Greater Specificity Will Facilitate Assessment Of Copermittee Compliance

Assessing Copermittee compliance with Order No. 40-42 has been challenging and resource intensive. There are many reasons for this including the following:

- Storm water permits are based on BMPs and lack numeric effluent limits
- MEP, the technology based standard for MS4 permits, had not been defined
- Order No. 90-42 was an "early" permit with broad vague language
- Order No. 90-42 lacked other "measurable" performance standards
- Storm water management is a developing field (most other discharges regulated by the SDRWQCB are well defined)

With respect to assessing permit compliance, a storm water permit's lack of numeric effluent limitations is a distinct disadvantage. This is because compliance (or noncompliance) with numeric effluent limitations is one of the most important tools used by the regional boards in their overall assessment of a discharger's compliance. The comparison of routine effluent monitoring data to the numeric effluent limitations specified in the permit provides an accurate and effective measure of permit compliance.

In contrast, assessing compliance with Order No. 90-42, a BMP-based "early" storm water permit, has proven complex and subjective. When effluent limits are absent, the inclusion of greater specificity is made all the more necessary. Reliance on BMPs, as opposed to numeric effluent limits, demands specification of those programs and activities that are relied upon to reduce pollution. To assess compliance with the early permit, the SDRWQCB has utilized a variety of other tools, with varying degrees of effectiveness (See "Status of Copermittee Compliance", Attachment 16).

Tentative Order 2001-01 now contains detailed narrative descriptions of its requirements that represent the SDRWQCB's definition of MEP. Such detailed requirements remove ambiguity by clearing spelling out the SDRWQCB' minimum expectations. In summary,

the increased specificity of the Tentative Order will greatly enhance a Copermittee's, the SDRWQCB's, or other interested party's ability to assess permit compliance.

Need For Increased Permit "Stringency" - - Exceeding the Federal Regulations

There has also been an increase in number of and stringency of permit requirements over time. As can be seen in the table below, Order No. 2001-01 requires considerably more of Copermittees than does Order No. 90-42. Furthermore, in some respects, the requirements of Tentative Order No. 2001-01 exceed the minimum requirements as specified in the federal regulations. The need for increased stringency and to exceed the federal regulations is discussed below.

1. Continuing Water Quality Degradation Requires Increased Stringency

The increasing impairment of our Region's waters due to urban runoff (as discussed on page 5 of the Fact Sheet/Technical Report, provided as Attachment 7 of Agenda Item 5) demands increased stringency in municipal storm water permits. The population and urban development of our Region has expanded dramatically since Order No. 90-42 was issued ten years ago, and the resulting water quality problems have mirrored this expansion. The closure or posting of local beaches has become all too familiar. Urban runoff now directly causes or contributes to all of the known receiving water quality impairments in the San Diego Region. The importance of water quality to our region's tourism industry and way of life has caused an increase in public outcry against urban runoff contamination and beach closures. Urban runoff issues are now a common site on our Region's newspaper headlines and governing body agendas. Legislation at the state level regarding water quality (such as AB 411) is being generated within our Region due in large part to the Region's pronounced urban runoff water quality issues.

The continued degradation of the Region's receiving water is evidence that the current collective efforts of the Copermittees to control urban runoff are either ineffective or inadequate. More must be done to reduce urban runoff pollution if the beneficial uses of the Region's receiving waters are to be protected. The more stringent requirements of the Tentative Order are needed to address these problems and the increased attention and expectations that accompany them.

2. Tentative Order Reflects a Decade of Evolving Technology

Versions of the San Diego Municipal Storm Water Permit have also become increasingly stringent due to the advancing progress in urban runoff management and technology which has occurred over time. Tentative Order No. 2001-01, and its requirements, reflect a 10 year evolution in the field of urban runoff management. Information on the impacts of urban runoff, as well as how to minimize these impacts, have greatly expanded since the existing Municipal Storm Water Permit for San Diego was first issued in 1990. In 1990, very few reference materials were available to Copermittees. Today there is a large and growing body of excellent resources available.

The Tentative Order takes advantage of this increased knowledge and the passage of time, by including additional requirements which have been proven effective or which are necessary to protect receiving waters from increasing urban runoff pollution. The result of the technology evolution is a longer and more detailed, but also more effective, permit.

3. Increased Stringency is Supported by USEPA and SWRCB

The increased specificity included in the Tentative Order is in large part derived from USEPA's guidance as provided in its *Guidance Manual for the Preparation of Part 2 of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems*[8] and its *Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits.*[9] Where the Tentative Order is more stringent than the federal regulations, the stringency is frequently based on the recommendations of the Guidance Manual. USEPA's guidance and the 1999 Phase II Storm Water regulations indicate that MS4 permits are to increase in stringency when reissued, especially where beneficial uses of receiving waters are not being protected.

The Interim Permitting Approach also supports increased specificity in storm water permits, recommending that municipal storm water permits use "best management practices (BMPs) in first-round storm water permits, and **expanded or better-tailored BMPs in subsequent permits**, where necessary, to provide for the attainment of water quality standards. In cases where adequate information exists to develop more specific conditions or limitations to meet water quality standards, these conditions or limitations are to be incorporated into storm water permits, as necessary and appropriate" (emphasis added). It is important to note that the SWRCB cited USEPA's Interim Permitting Approach as support for its recent tentative decision which upheld the increased specificity of numeric sizing criteria requirements for post-construction BMPs as appropriate requirements in municipal storm water permits. This SWRCB decision supporting Standard Urban Storm Water Mitigation Plans (SUSMPs) demonstrates the SWRCB's general recognition of the need for increased requirements in municipal storm water permits.

The SWRCB's decision to require MS4 discharges to meet water quality standards also supports increased specificity in municipal storm water permits. In Orders WQ 98-01 and 99-05, the SWRCB prescribed specific precedent setting Receiving Water Limitations language to be included in all future MS4 permits. This language specifically requires that MS4 dischargers meet water quality standards and allows for the use of narrative BMPs (increasing in stringency and implemented in an iterative process) as the mechanism by which water quality standards can be met. The idea of an iterative process

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[8] U.S. Environmental Protection Agency. 1992. Guidance Manual for the Preparation of Part 2 of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems. EPA 833-B-92-002.

[9] U.S. Environmental Protection Agency. 1996. Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits. 61 FR 43761.

of increasingly stringent BMP implementation is consistent with the concept of increasingly stringent MS4 permits. For example, increasingly stringent BMP implementation is required for discharges to impaired water bodies; likewise, increasingly stringent MS4 permits are required for regions with numerous water bodies impaired by urban runoff.

The SWRCB clearly expresses its intent that MS4 permits should increase in stringency in a manner similar to increasingly stringent BMP implementation when it states in a recent memorandum "[...] **because most MS4 discharges enter impaired water bodies, there is a real need for permits to include stringent requirements to protect those water bodies. As total maximum daily loads (TMDLs) are developed, it is likely that MS4s will have to participate in pollutant load reductions, and the MS4 permits are the most effective vehicles for those reductions.**"

In summary, Tentative Order No. 2001-01 is consistent with USEPA and SWRCB support for increasing stringency in MS4 permits as necessary to protect the beneficial uses of the Region's receiving waters from further impairment.

Tentative Order 2001-01 Is Fundamentally The Same As Order No. 90-42

The "early" permit and each of the drafts of the renewal permit as well as the federal regulations (from which the essential requirements are derived) all have the same basic objective, namely, to reduce pollutants in urban runoff discharges to receiving waters. As shown in the table below, each of the documents also contain each of the fundamental underlying requirements specified in the federal regulations.

From a broad brush perspective, (even though differing substantially in level of detail and number of pages), each version of the Order is fundamentally the same. Tentative Order No. 2001-01 is not a "new" permit. It has the same underlying objective and contains the same essential ingredients as Order No. 90-42, the "early" permit to which the Copermittees have been subject for the past ten years.

The comparisons table clearly shows that the number, specificity, and stringency of permit requirements has increased over time throughout the permit development process. Perhaps more importantly however, the table also demonstrates that the most fundamental requirements, as specified in the federal regulations, have remained the same through time and that each are contained in Order No. 90-42, in the Tentative Order, and in both of the previous drafts.

Furthermore because the language contained in Order No. 90-42 and the federal regulations is quite broad, the basic requirements typically encompass or embody the more enhanced requirements of Tentative Order No. 2001-01 and previous drafts. For example, with regards to requirements for enforcement by the Copermittees, Order No. 90-42 simply states "Pursue enforcement actions as necessary to ensure compliance [...]." Though this statement is relatively broad, it embodies the more specific requirements of Tentative Order No. 2001-01, such as the Tentative Order's requirements

to "enforce ordinances and permits as necessary [at construction, industrial, and commercial sites] to maintain compliance with the Order." In a reciprocal manner, most of the requirements of Tentative Order No. 2001-01 are embodied in Order No. 90-42 and the federal NPDES storm water regulations. Footnotes to the table are occasionally provided to exhibit these types of circumstances.

The similarity of the various order, drafts, and regulations included in the table can also be observed when the number of requirements in each document are tallied. For example, roughly 80% of the Tentative Order's requirements were also present in the 1998 draft of the San Diego Municipal Storm Water Permit. Even the requirements of Order No. 90-42 encompass roughly 40% of the requirements of Tentative Order No. 2001-01. This exhibits the similarity in the requirements of the various documents covered in the table, and also demonstrates that the majority of the requirements of Tentative Order No. 2001-01 have been presented for public review prior to the public release of the Tentative Order.

Requirement Category	Requirements	Order No. 90-42 (July, 1990)	Federal NPDES Regulations (November, 1990)	1995 Draft (May, 1995)	1998 Draft (October, 1998)	Tentative Order No. 2001-01 (October, 2000)
Prohibition of Various Types of Discharges (Section A., page 8 of Tentative Order No. 2001-01)	Prohibit discharges into and from municipal separate storm sewer systems (MS4s) causing pollution, contamination, or nuisance	X	X	X	X	X
	Prohibit discharges from MS4s causing exceedances of water quality objectives	X	X	X	X	X
	Prohibit discharges into and from MS4s containing pollutants which have not been reduced to maximum extent practicable (MEP)	X	X	X	X	X
	Prohibit post-development runoff from new development which is greater in peak rate or velocity than pre-development runoff from the same site	-	-	X	X	X
	Prohibit discharges of post-development runoff into a Clean Water Act section 303(d) water body containing any pollutant (for which the water body is already impaired) in levels exceeding predevelopment levels (for those same pollutants)	-	-			X
	Prohibit discharges from MS4s as required by Basin Plan Prohibitions	X	N/A	X	X	X
Prohibitions of Non-Storm Water Discharges (Section B., page 9 of Tentative Order No. 2001-01)	Prohibit non-storm water discharges, except de minimis discharges	X	X	X	X	X
	Prohibit de minimis discharges if source of pollutants or require BMPs for the discharges	X	X	X	X	X
	For de minimis discharges not prohibited, submit information on discharge not prohibited and what BMPs will be required	-	-	X	X	X
	Require BMPs for non-emergency fire fighting flows which are significant sources of pollutants	-	X	X	X	X

Requirement Category	Requirements	Order No. 90-42 (July, 1990)	Federal NPDES Regulations (November, 1990)	1995 Draft (May, 1995)	1998 Draft (October, 1998)	Tentative Order No. 2001-01 (October, 2000)
	Prohibit non-prohibited non-storm water discharges with pollutants which can't be reduced to MEP	X	X	X	X	X
Receiving Water Limitations (Section C., page 10 of Tentative Order No. 2001-01)	Prohibit discharges causing violation of water quality standards	X	X	X	X	X
	If exceedance of water quality standards occurs, implement control measures stop exceedance	X	X	-	X	X
	If exceedance of water quality standards occurs, notify SDRWQCB of exceedance and submit report to SDRWQCB of measures to be taken	X	-	-	X	X

Requirement Category	Requirements	Order No. 90-42 (July, 1990)	Federal NPDES Regulations (November, 1990)	1995 Draft (May, 1995)	1998 Draft (October, 1998)	Tentative Order No. 2001-01 (October, 2000)
	If exceedance of water quality standards occurs, revise urban runoff management program and monitoring program, and implement the programs	-	-	-	X	X
Legal Authority (Section D., page 10 of Tentative Order No. 2001-01)	Establish, maintain, and enforce legal authority to control pollutant discharges into and from MS4	X[10]	X[11]	X	X	X
	Establish legal authority which authorizes Copermittee to control pollutant discharges from industrial and construction activities into MS4	X	X	X	X	X
	Establish legal authority which authorizes Copermittee to prohibit all illicit discharges	X	X	X	X	X
	Establish legal authority which authorizes Copermittee to prohibit and eliminate illicit connections	X	X	X	X	X
	Establish legal authority which authorizes Copermittee to control discharge of spills, dumping, or disposal of materials other than storm water into MS4	X	X	X	X	X

[10] Much of the language in Order No. 90-42 regarding the Copermittees' attainment of legal authority is very broad. It states "Enact legislation and ordinances as necessary to ensure compliance with the stormwater management program and the implementation plans." SDRWQCB interprets this language as requiring the establishment of legal authority to control all pollutant discharges into and from the MS4. Therefore, all requirements regarding the attainment of legal authority for the purpose of controlling pollutant discharges into and from the MS4 are "checked" in the Order No. 90-42 column.

[11] The Federal NPDES regulations require Copermittees to operate pursuant to legal authority which enables them to "[R]equire compliance with conditions in ordinances, permits, contracts, and orders" (40 CFR 122.26(d)(2)(i)(E). Therefore, the Federal NPDES regulations require the Copermittees to have legal authority to comply with requirements in orders from the SDRWQCB. Accordingly, legal authority requirements necessary to ensure compliance with SDRWQCB orders are "checked" in the Federal NPDES Regulations column.

Requirement Category	Requirements	Order No. 90-42 (July, 1990)	Federal NPDES Regulations (November, 1990)	1995 Draft (May, 1995)	1998 Draft (October, 1998)	Tentative Order No. 2001-01 (October, 2000)
	Establish legal authority which authorizes Copermittee to require compliance with Copermittee ordinances, permits, contracts, or orders	X	X	X	X	X
	Establish legal authority which authorizes Copermittee to utilize enforcement mechanisms	X	X	X[12]	X	X
	Establish legal authority which authorizes Copermittee to control pollutants from one portion of shared MS4 to another through interagency agreements	X	X	X	X	X
	Establish legal authority which authorizes Copermittee to carry out inspections, surveillance, and monitoring necessary to determine compliance	X	X	X	X	X
	Establish legal authority which authorizes Copermittee to require the use of BMPs	X	X	X	X	X
	Provide certified statement that Copermittee has adequate legal authority	-	-	X	X	X
	Provide certified statement that identifies responsibilities of each municipal department which conducts urban runoff activities	-	-	X	-	X
	Provide certified statement citing urban runoff related ordinances and how they are enforceable	-	-	X	-	X
	Provide certified statement describing how ordinances are implemented and appealed	-	-	X	-	X

[12] The 1995 Draft requires legal authority to be obtained which authorizes the Copermittee to "[R]equire compliance with conditions in ordinances, permits, contracts, or orders." Legal authority to "require compliance" is analogous to legal authority to "enforce." Therefore, the requirement to "establish legal authority which authorizes Copermittee to utilize enforcement mechanisms" is "checked" in the 1995 Draft column.

Requirement Category	Requirements	Order No. 90-42 (July, 1990)	Federal NPDES Regulations (November, 1990)	1995 Draft (May, 1995)	1998 Draft (October, 1998)	Tentative Order No. 2001-01 (October, 2000)
	Provide certified statement describing issuance of administrative orders and injunctions or use of court system for enforcement actions	-	-	-	-	X
Technology Based Standards (Section E., page 12 of Tentative Order No. 2001-01)	BMPs shall be implemented to reduce pollutants discharges into and from the MS4 to the MEP	X	X	X	X	X
	Pollutant discharges into and from the MS4 from industrial activity owned by the Copermittee shall be reduced to BAT/BCT	-	X	X	X	X
	Pollutant discharges into and from the MS4 from construction activity owned by the Copermittee shall be reduced to BAT/BCT	-	X	X	X	X
Urban Runoff Management Plan (Section F., page 13 of Tentative Order No. 2001-01)	Implement urban runoff management plan to reduce discharge of pollutants into and from MS4	X	X	X	X	X
Land-Use Planning for New Development and Significant Redevelopment (Section F.1., page 13 of Tentative Order No. 2001-01)	Reduce pollutant discharges from new development and redevelopment to the MEP	X	X	X	X	X
	Utilize urban planning to minimize discharge of pollutants in urban runoff	X	X	X	X	X
	Minimize short and long-term impacts on receiving water quality from new development and redevelopment	-	-	-	-	X
	Incorporate water quality and watershed principles into General Plan	-	-	-	-	X
	Modify development project approval processes	-	-	X	X	X
	Include conditions of approval in local permits for new development	-	-	X	X	X

Requirement Category	Requirements	Order No. 90-42 (July, 1990)	Federal NPDES Regulations (November, 1990)	1995 Draft (May, 1995)	1998 Draft (October, 1998)	Tentative Order No. 2001-01 (October, 2000)
	Revise environmental review processes and CEQA initial study checklists	-	-	-	X	X
	Conduct education efforts focused on new development and redevelopment	-	-	-	-	X
	Educate municipal staff on requirements for new development and redevelopment	-	-	X	X	X
	Educate project applicants, contractors, developers, property owners, etc. on requirements for new development and redevelopment	-	-	X	X	X
Land-Use Planning for New Development and Significant Redevelopment (SUSMPs) (Section F.1.b(2)., page 15 of Tentative Order No. 2001-01)	Develop Standard Urban Storm Water Mitigation Plans to reduce pollutants and runoff flows from priority development project categories	-	-	-	X	X
	Implement post-construction BMPs for new development and redevelopment	-	X	X	X	X
	Require structural post-construction BMPs to meet design criteria and performance standards	-	-	X	X	X
	Require structural post-construction BMPs for priority development project categories to meet numeric sizing criteria	-	-	-	-	X
	Develop procedure for pollutants of concern to be identified for new development projects	-	-	-	-	X
	Develop a process by which SUSMPs will be implemented	-	-	-	-	X
	Develop a program to manage waivers from SUSMPs	-	-	-	-	X
	Require protection of groundwater resources when BMPs with the primary function of infiltration are used	-	-	-	-	X

Requirement Category	Requirements	Order No. 90-42 (July, 1990)	Federal NPDES Regulations (November, 1990)	1995 Draft (May, 1995)	1998 Draft (October, 1998)	Tentative Order No. 2001-01 (October, 2000)
Construction (Section F.2., page 21 of Tentative Order No. 2001-01)	Reduce pollutant discharges from construction sites	X	X	X	X	X
	Require implementation of pollution prevention methods at construction sites	-	X[13]	X	X	X
	Update grading ordinances	-	-	-	X	X
	Modify construction and grading approval processes	-	-	-	X	X
	Include conditions of approval in local grading and construction permits to ensure pollutant discharges are reduced to MEP	-	-	X	X	X
	Inventory all construction sites	X[14]	X	-	X	X
	Prioritize construction sites for construction oversight activities	-	X[15]	-	X	X
	Require implementation of designated minimum BMPs at each construction site	X	X	X	X	X

[13] The Preamble to the Federal NPDES regulations states "[I]n implementing these regulations, EPA and the States will strive to achieve environmental results in a cost effective manner by placing high priority on pollution prevention activities [...]." For this reason, SDRWQCB interprets Federal NPDES regulation requirements for implementation of control measures to include requirements for implementation of pollution prevention control measures. Accordingly, all requirements regarding pollution prevention are "checked" in the Federal NPDES Regulations column.

[14] The language in Order No. 90-42 regarding requirements for pollutant source inventories is very broad. It states "The permittees shall inventory [...] major sources of pollutants such as industrial and military and other federal facilities, airports, highways, shopping centers, and large parking areas." Staff interprets this language to apply to all land-use areas within each Copermittee's jurisdiction, including construction, municipal, industrial, commercial, and residential areas. Therefore, all requirements regarding pollutant source inventories are "checked" in the Order No. 90-42 column.

[15] The Federal NPDES regulation requirements for prioritization are broad. They state "Proposed management programs shall describe priorities for implementing controls." SDRWQCB interprets this language to apply to all land-use areas within each Copermittee's jurisdiction, including construction, municipal, industrial, commercial, and residential areas. Therefore, all requirements regarding prioritization are "checked" in the Federal NPDES Regulation column.

Requirement Category	Requirements	Order No. 90-42 (July, 1990)	Federal NPDES Regulations (November, 1990)	1995 Draft (May, 1995)	1998 Draft (October, 1998)	Tentative Order No. 2001-01 (October, 2000)
	Require implementation of additional BMPs at construction sites tributary to Clean Water Act section 303(d) water bodies	X	X	X	X	X
	Inspect construction sites for compliance with ordinances and permits	-	X	X	X	X
	Establish inspection frequencies for construction sites based on their prioritization	-	X	X	X	X
	Inspect high priority construction sites weekly (or monthly if SWPPP has been reviewed and is found to have been implemented)	-	-	-	-	X
	Inspect medium and low priority construction sites twice during the wet season	-	-	-	-	X
	Inspect construction sites as needed during the dry season	-	-	-	-	X
	Enforce ordinances and permits at all construction sites	X[16]	X	X	X	X
	Provide notification to SDRWQCB of non-compliant sites	X[17]	X	X	X	X
	Conduct education efforts focused on construction	-	X	X	X	X
	Educate municipal staff on requirements for construction	-	-	X	X	X
	Educate project applicants, contractors, developers, property owners, etc. on requirements for construction	-	X	X	X	X

[16] The language in Order No. 90-42 regarding enforcement is very broad. It states "[P]ursue enforcement actions as necessary to ensure compliance with the stormwater management programs and the implementation plans." SDRWQCB interprets this language to apply to all areas within each Copermittee's jurisdiction, including construction, municipal, industrial, commercial, and residential areas. Therefore, all requirements regarding enforcement are "checked" for Order No. 90-42.

[17] Order No. 90-42 requires reporting of all instances of non-compliance.

Requirement Category	Requirements	Order No. 90-42 (July, 1990)	Federal NPDES Regulations (November, 1990)	1995 Draft (May, 1995)	1998 Draft (October, 1998)	Tentative Order No. 2001-01 (October, 2000)
Municipal (Section F.3.a., page 24 of Tentative Order No. 2001-01)	Reduce pollutant discharges from municipal areas and activities	X	X	X	X	X
	Reduce impacts on receiving waters from operating and maintaining public streets, roads, and highways	-	X	X	X	X
	Assure that flood management projects assess water quality impacts	-	X	X	X	X
	Implement control measures for discharges of pollutants from municipal waste storage facilities	-	X	X	X	X
	Require implementation of pollution prevention methods for municipal areas and activities	-	X	X	X	X
	Inventory all municipal areas and activities which generate pollutants	X	-	-	-	X
	Prioritize municipal areas and activities for oversight	-	X	-	-	X
	Require implementation of designated minimum BMPs for each municipal area or activity	-	X	X	X	X
	Require implementation of additional BMPs for municipal areas and activities tributary to Clean Water Act section 303(d) water bodies	-	X	X	X	X
	Implement a schedule of maintenance activities at all structural controls designed to reduce pollutant discharges to or from the MS4	X[18]	X	X	X	X

[18] The language in Order No. 90-42 regarding maintenance of the MS4 is broad. It states "Permittees shall, at all times, properly maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by a permittee to achieve compliance with the conditions of this Order." Staff interprets this language to apply to consistent periodic maintenance of the entire MS4. Therefore, all requirements regarding maintenance of the MS4 are "checked" for Order No. 90-42.

Requirement Category	Requirements	Order No. 90-42 (July, 1990)	Federal NPDES Regulations (November, 1990)	1995 Draft (May, 1995)	1998 Draft (October, 1998)	Tentative Order No. 2001-01 (October, 2000)
	Implement a schedule of maintenance for the MS4	X	X	X	X	X
	Inspect and remove waste accumulated in the MS4	X	-	X	X	X
	Perform additional MS4 cleaning as necessary	-	-	X	X	X
	Keep records of cleanings and quantity of material removed	-	-	-	X	X
	Dispose of MS4 waste properly	-	-	-	X	X
	Eliminate waste discharges during maintenance and cleaning	-	-	-	X	X
	Implement BMPs to reduce contribution of pollutants associated with the application, storage, and disposal of pesticides, herbicides, and fertilizers	-	X	X	X	X
	Inspect high priority municipal areas and activities annually	-	-	-	-	X
	Enforce storm water ordinance for all municipal areas and activities	X	X	X	X	X
Industrial (Section F.3.b., page 27 of Tentative Order No. 2001-01)	Reduce pollutants in runoff from industrial sites	X	X	X	X	X
	Require implementation of pollution prevention methods at industrial sites	-	X	X	X	X
	Inventory all industrial sites	X	X	X	X	X
	Prioritize industrial sites for oversight	-	X	X	X	X
	Require implementation of designated minimum BMPs for each industrial site	X	X	X	X	X
	Require implementation of additional BMPs for industrial sites tributary to Clean Water Act section 303(d) water bodies	-	X	X	X	X
	Require monitoring program for runoff from high priority industrial sites	-	X	-	X	X

Requirement Category	Requirements	Order No. 90-42 (July, 1990)	Federal NPDES Regulations (November, 1990)	1995 Draft (May, 1995)	1998 Draft (October, 1998)	Tentative Order No. 2001-01 (October, 2000)
	Inspect industrial sites for compliance with ordinances and permits	-	X	X	X	X
	Establish inspection frequencies for industrial sites based on their prioritization	-	X	X	X	X
	Inspect high priority industrial sites annually (or biannually if SWPPP has been reviewed and is found to have been implemented)	-	-	-	-	X
	Enforce ordinances at all industrial sites	X	X	X	X	X
	Provide notification to SDRWQCB of non-compliant sites	X	X	X	X	X
Commercial (Section F.3.c., page 30 of Tentative Order No. 2001-01)	Reduce pollutants in runoff from commercial sites	X	X	X	X	X
	Require implementation of pollution prevention methods at commercial sites	-	X	X	X	X
	Inventory all high priority commercial sites	X	-	X	X	X
	Require implementation of designated minimum BMPs for each commercial site	X	X	X	X	X
	Require implementation of additional BMPs for commercial sites tributary to Clean Water Act section 303(d) water bodies	X	X	X	X	X
	Inspect high priority commercial sites as needed	-	-	X	-	X
	Enforce ordinances at all commercial sites	X	X	X	X	X
Residential (Section F.3.d., page 31 of Tentative Order No. 2001-01)	Reduce pollutants in runoff from residential areas and activities	X	X	X	X	X
	Require implementation of pollution prevention methods for residential areas and activities	-	X	X	X	X
	Inventory all high priority residential areas and activities	X	-	-	X	X

Requirement Category	Requirements	Order No. 90-42 (July, 1990)	Federal NPDES Regulations (November, 1990)	1995 Draft (May, 1995)	1998 Draft (October, 1998)	Tentative Order No. 2001-01 (October, 2000)
	Require implementation of designated minimum BMPs for high priority residential areas and activities	X	X	X	X	X
	Require implementation of additional BMPs for residential areas and activities tributary to Clean Water Act section 303(d) water bodies	X	X	X	X	X
	Enforce ordinances for all residential areas and activities	X	X	X	X	X
Education (Section F.4., page 32 of Tentative Order No. 2001-01)	Implement a education program to increase knowledge of MS4s, impacts of urban runoff on receiving waters, and potential BMP solutions	-	X	X	X	X
	Implement education program to measurably change behavior of target communities	-	-	-	X	X
	Educate municipal departments and personnel	-	X	X	X	X
	Educate construction site owners and developers	-	X	X	X	X
	Educate industrial owners and operators	-	-	X	X	X
	Educate commercial owners and operators	-	-	X	X	X
	Educate residential community, general public, school children	-	-	X	X	X
	Educate quasi-governmental agencies	-	-	-	-	X
Illicit Discharge Detection and Elimination (Section F.5., page 34 of Tentative Order No. 2001-01)	Seek and eliminate illicit discharges and connections	X	X	X	X	X
	Conduct dry weather field screening of MS4 outfalls to detect illicit discharges and connections	X	X	X	X	-
	Conduct dry weather analytical monitoring of MS4 outfalls	-	-	-	-	X

Requirement Category	Requirements	Order No. 90-42 (July, 1990)	Federal NPDES Regulations (November, 1990)	1995 Draft (May, 1995)	1998 Draft (October, 1998)	Tentative Order No. 2001-01 (October, 2000)
	Follow-up on potential illicit discharges or connections based on dry weather analytical monitoring	-	X	X	X	X
	Establish criteria to identify where follow-up investigations appropriate	-	-	X	X	X
	Eliminate detected illicit discharges and connections	X	X	X	X	X
	Enforce ordinances, orders, and other legal authority to prevent and eliminate illicit discharges and connections	X	X	X	X	X
	Prevent and respond to sewage spills (including from private laterals) and other spills	X	X	X	X	X
	Develop and implement a mechanism to be notified of all sewage spills from private laterals	-	-	-	-	X
	Facilitate public reporting of illicit discharges and connections through operation of a public hotline	-	X	X	X	X
	Facilitate proper management and disposal of used oil, toxic materials, and other household hazardous wastes	-	X	X	X	X
	Implement controls and measures to limit infiltration of seepage from sanitary sewers to MS4s	-	X	X	X	X

Requirement Category	Requirements	Order No. 90-42 (July, 1990)	Federal NPDES Regulations (November, 1990)	1995 Draft (May, 1995)	1998 Draft (October, 1998)	Tentative Order No. 2001-01 (October, 2000)
Public Participation (Section F.6., page 35 of Tentative Order No. 2001-01)	Incorporate public participation into urban runoff management plan	-	X	-	X	X
Assessment of Urban Runoff Management Program Effectiveness (Section F.7., page 36 of Tentative Order No. 2001-01)	Develop and implement long-term strategy for assessing effectiveness of the urban runoff management program	X	X	X	X	X
	Assess status of compliance	-	-	-	-	X
Fiscal Analysis (Section F.8., page 36 of Tentative Order No. 2001-01)	Develop a strategy to conduct a fiscal analysis of the urban runoff management program	-	-	-	-	X
	Conduct fiscal analysis annually	X	X	X	X	X
Watersheds (Section J., page 41 of Tentative Order No. 2001-01)	Develop and implement a watershed urban runoff management program	-	X[19]	-	X	X
	Collaborate with other Copermittees in watershed and identify and mitigate highest priority water quality issues in the watershed	-	-	-	X	X
	Create a map of each watershed	-	-	-	X	X
	Assess water quality of all receiving waters in each watershed	-	X[20]	-	X	X
	Identify and prioritize water quality problems in each watershed caused by MS4 discharges	-	-	-	X	X

[19] The Federal NPDES regulations state "Proposed programs may impose controls on a [...] watershed basis [...]" (40 CFR 122.26(d)(2)(iv).
[20] The Federal NPDES regulations require an assessment of the quality of receiving waters (40 CFR 122.26(d)(1)(iv)(C)). If the urban runoff management program were to be conducted on a watershed basis, the water quality assessment would also be conducted on a watershed basis.

Requirement Category	Requirements	Order No. 90-42 (July, 1990)	Federal NPDES Regulations (November, 1990)	1995 Draft (May, 1995)	1998 Draft (October, 1998)	Tentative Order No. 2001-01 (October, 2000)
	Develop a time schedule of short and long-term recommended watershed activities	-	-	-	X	X
	Identify Copermittees and corresponding responsibilities for each watershed	-	-	-	X	X
	Develop a mechanism for public participation in watershed process	-	-	-	X	X
	Implement a watershed based education program	-	-	-	-	X
	Develop a mechanism to facilitate watershed-based land use planning between Copermittees	-	-	-	-	X
	Develop an implementation schedule for collaborative watershed-based land use planning	-	-	-	-	X
	Assess long-term effectiveness of watershed urban runoff management program	-	X[21]	-	X	X
Reporting (Sections H., I., L., and M., pages 36 – 44 of Tentative Order No. 2001-01)	Submit description of urban runoff management program	X	X	X	X	X
	Document all urban runoff activities and submit annually	X	X	X	X	X
	Submit description of watershed urban runoff management program	-	X[22]	-	X	X
	Document all watershed urban runoff activities and submit annually	-	X	-	X	X
	Submit report on dry weather monitoring results	X	X	X	X	X
	Submit monitoring report annually	X	X	X	X	X

[21] If an urban runoff management program is conducted on a watershed basis, the Federal NPDES regulations would require an assessment of the effectiveness of the watershed urban runoff management program.

[22] If an urban runoff management program is conducted on a watershed basis, a description of the watershed urban runoff management program would be required.

Requirement Category	Requirements	Order No. 90-42 (July, 1990)	Federal NPDES Regulations (November, 1990)	1995 Draft (May, 1995)	1998 Draft (October, 1998)	Tentative Order No. 2001-01 (October, 2000)
	All reports shall be signed and certified	X	X	X	X	X
Copermittee Collaboration (Section N., page 44 of Tentative Order No. 2001-01)	Collaborate with other Copermittees to address common issues, promote consistency, and coordinate activities	-	X	X	X	X
	Execute and submit an memorandum of understanding, joint powers authority, or other formal agreement between the Copermittees	X	X	X	X	X
	Execute and submit a memorandum of understanding, joint powers authority, or other formal agreement which provides a management structure for designation of joint responsibilities	X	-	X	X	X
	Execute and submit a memorandum of understanding, joint powers authority, or other formal agreement which designates fiscal responsibilities of Copermittees	X	-	-	X	-
	Execute and submit a memorandum of understanding, joint powers authority, or other formal agreement which provides a management structure for decision making	-	-	-	X	X
	Execute and submit a memorandum of understanding, joint powers authority, or other formal agreement which provides a management structure for watershed activities	-	-	-	-	X
	Execute and submit a memorandum of understanding, joint powers authority, or other formal agreement which provides a management structure for information management	-	-	-	X	X
	Jointly develop a standardized format for reports	-	-	-	X	X

Requirement Category	Requirements	Order No. 90-42 (July, 1990)	Federal NPDES Regulations (November, 1990)	1995 Draft (May, 1995)	1998 Draft (October, 1998)	Tentative Order No. 2001-01 (October, 2000)
Principal Permittee (Section O., page 45 of Tentative Order No. 2001-01)	Serve as a liaison between Copermittees and SDRWQCB	X	-	-	X	X
	Designate Principal Permittee	X	-	-	X	X
	Ensure coordination of permit activities among Copermittees	X	-	-	X	X
	Integrate individual Copermittee documents	X	-	-	X	X
Non-Compliance (Section R.1., page 49 of Tentative Order No. 2001-01)	Report all instances of non-compliance	X	X	X	X	X
Monitoring (Attachment B of Tentative Order No. 2001-01)	Develop a monitoring program	X	X	X	X	X
	Develop storm water monitoring program	X	X	X	X	X
	Develop urban runoff monitoring program	X	-	-	-	X
	Develop receiving water monitoring program	X	-	X	X	X
	Develop a report that summarizes previous monitoring results	X	-	-	-	X
	Develop a report that recommends future monitoring activities	-	-	-	-	X
	Estimate annual pollutant load of cumulative discharges	-	X	X	X	X
	Conduct urban stream bioassessment monitoring	-	-	-	-	X
	Conduct long-term mass loading monitoring	X	-	X	X	X
	Conduct coastal storm drain monitoring	-	-	-	-	X
	Conduct ambient bay, lagoon, and coastal receiving water monitoring	-	-	X	X	X
	Conduct toxic hot spot monitoring	-	-	X	X	X
	Conduct dry weather field screening	X	X	X	X	X
	Conduct dry weather analytical monitoring	-	-	-	-	X
	Develop map of MS4	X	X	X	X	X

Requirement Category	Requirements	Order No. 90-42 (July, 1990)	Federal NPDES Regulations (November, 1990)	1995 Draft (May, 1995)	1998 Draft (October, 1998)	Tentative Order No. 2001-01 (October, 2000)
Total Number of Requirements (estimate)	187	77	108	121	150	185
Total Number of Pages	-	33 (+ 3)	-	39 (+31)	26 (+17)	50 (+30)

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